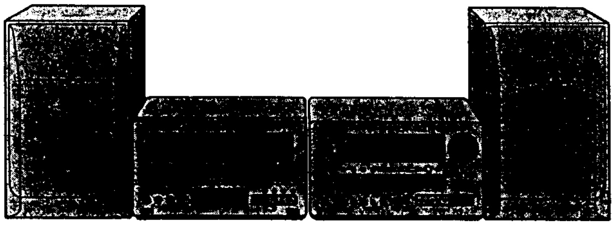
# MHC-1600

# SERVICE MANUAL

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*



- MHC-1600 is composed of following models. As for the service manual it is issued for each component model, then, please refer to it.

**COMPONENT MODEL NAME FOR MHC-1600**

| | |
|---|---|
| AMPLIFIER, CD, TUNER | HCD-H1600 |
| DECK | TC-H1600 |
| SPEAKER SYSTEM | SS-H1600 |

## SPECIFICATIONS

| | |
|---|---|
| Power requirements | European model:<br>220 — 230 V, 50/60 Hz<br>U.K. model: 240 V, 50 Hz<br>Model for other countries:<br>110 — 120 V or<br>220 — 240 V AC<br>adjustable, 50/60 Hz |
| Power consumption | European model: 100 watts<br>U.K. model: 170 watts<br>Model for other countries:<br>100 watts |
| Dimensions | Tuner/Amplifier/CD player<br>Approx. 225 x 125 x 265 mm (w/h/d)<br>(8$^{7}/_{8}$ x 5 x 10$^{1}/_{2}$ inches)<br>Cassette deck<br>Approx. 225 x 125 x 230 mm (w/h/d)<br>(8$^{7}/_{8}$ x 5 x 9$^{1}/_{8}$ inches)<br>incl. projecting parts and controls |
| Weight | Tuner/Amplifier/CD Player<br>Approx. 4.5 kg (9 lb 15 oz)<br>Cassette deck<br>Approx. 2.5 kg (5 lb 8 oz) |

Design and specifications subject to change without notice.

**Note**
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MICROFILM

# MINI HI-Fi COMPONENT SYSTEM

SONY®

# HCD-H1600

# SERVICE MANUAL

*AEP Model*
*UK Model*

SONY
MHC-1600

This set is the tuner, deck, CDP and amplifier section in MHC-1600.

## SPECIFICATIONS

### Tuner Section

| | |
|---|---|
| System | FM stereo, FM/AM superheterodyne tuner |
| **FM tuner section** | |
| Tuning range | 87.5 — 108 MHz |
| Antenna terminals | 75 ohms unbalanced |
| Intermediate frequency | 10.7 MHz |
| **AM tuner section** | |
| Tuning range | For Europe and U.K. (except Italy)<br>MW: 531 — 1,602 kHz<br>LW: 153 — 279 kHz<br>For Italy<br>MW: 522 — 1,611 kHz<br>LW: 144 — 288 kHz |
| Antenna | AM loop antenna<br>External antenna terminals |
| Intermediate frequency | 450 kHz |

### Amplifier Section

| | |
|---|---|
| Continuous RMS power output | 30 + 30 watts (6 ohms at 1 kHz, 5% THD)<br>25 + 25 watts (6 ohms, DIN, 1 kHz) |
| Music power output (for the Europe and U.K. model) | 45 watts |
| Peak music power output (for the models other than Europe and U.K.) | 280 watts (6 ohms) |
| Inputs | MIX MIC (minijack):<br>sensitivity 1 mV, impedance 600 ohms<br>DAT IN:<br>sensitivity 450 mV, impedance 47 kilohms<br>For Europe and U.K.<br>PHONO (phono jacks):<br>sensitivity 5 mV, impedance 47 kilohms |
| Outputs | HEADPHONES (stereo minijack):<br>accepts headphones of 8 ohms or more.<br>SPEAKER:<br>accepts speakers of 6 to 16 ohms |

| | |
|---|---|
| Model Name Using Similar Mechanism | CDP-H3600 |
| CD Mechanism Name | CDM13BD4A |
| Base Unit Name | BU-5BD4A |

### Compact Disc Player Section

| | |
|---|---|
| System | Compact disc digital audio system |
| Laser | Semiconductor laser ($\lambda$ = 780 nm)<br>Emission duration continuous |
| Laser output | Max. 44.6 $\mu$W*<br>* This output is the value measured at distance of about 200 mm from the objective lens surface on the Optical Pick-up Block. |
| Signal to noise ratio | More than 90 dB |
| Dynamic range | More than 90 dB |
| Harmonic distortion | Less than 0.05% (at 1 kHz) |
| Channel separation | More than 90 dB |
| Output level | 2 V (at 50 kilohms) |
| Load impedance | More than 10 kilohms |

MICROFILM

## MINI HI-FI COMPONENT SYSTEM

SONY®

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G: Germany
IT: Italian

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

# SECTION 1
# GENERAL

This section is extracted from instruction manual.

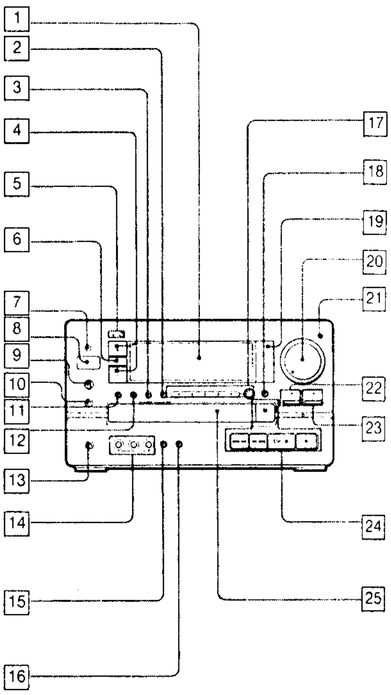
## Parts Identification

Refer to the pages indicated in ● for use of the buttons.

### Tuner/Amplifier/CD player Section A

1. Display window
2. MEMORY/NEXT button ⑳
3. TIMER SET button (106)
4. TUNING PRESET/TIMER +/– buttons ⑳
5. PRESET/TUNING button and PRESET indicator (52)
6. BAND button ㊽
7. Remote control sensor
8. SYSTEM POWER button ㉔
9. MIC (microphone) LEVEL control (118)
10. MIX MIC (mixing microphone) input jack (minijack) (118)
11. CLOCK SET button ⑳
12. TIMER SELECT button (110)
13. HEADPHONES jack (stereo minijack) ㉒
14. PLAY MODE buttons
    - CONTINUE button ㉜
    - SHUFFLE button ㉜
    - PROGRAM button ㊳
15. CHECK button ㊵
16. EDIT/TIME FADE button (82)
17. PRESET button and indicators (62)
18. EQ (equalizer) ON/OFF button (62)
19. FUNCTION button ⑱
20. VOLUME control ㉒
21. WAKE UP button (114)
22. S-SUR (Simulated surround) button and indicator ㉒
23. DBFB (Dynamic Bass Feedback) button and indicator ㉒
24. CD operation buttons
    - ⏏ : OPEN/CLOSE ㉔
    - ■ : Stop ㉔
    - ▷II : Play/pause ㉔
    - |◁◁ ◀◀ ▶▶ ▷▷| : Manual search (when kept depressed)/Automatic Music Sensor (when pressed) ㉖
25. Disc tray ㉔

A

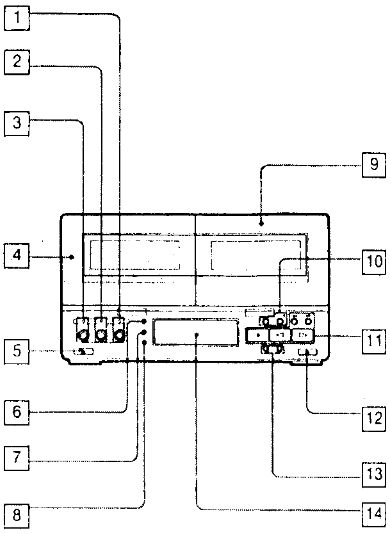


# Parts Identification

## Cassette Deck Section B

1 CD SYNCHRO (CD synchronized recording) button and indicator (88)
2 NORMAL SPEED (normal-speed dubbing) button and indicator (76)
3 HIGH SPEED (high-speed dubbing) button and indicator (76)
4 Cassette holder (Deck A) (54)
5 ⏏ (eject) button (Deck A) (54)
6 RESET button (56)
7 DOLBY NR (Dolby Noise Reduction) button (56)
8 DIRECTION MODE button (54)
9 Cassette holder (Deck B) (70)
10 Tape operation buttons (for Deck B only)
    II : PAUSE (54)
    ● : REC (recording) (70)
11 Tape operation buttons (for Deck A and B)
    ◀◀ ▶▶ : Fast winding (56)
    ■ : Stop (54)
    ▷ : Forward play (54)
    ◁ : Reverse play (54)
12 ⏏ (eject) button (Deck B) (70)
13 DECK A/B selection button (54)
14 Display window

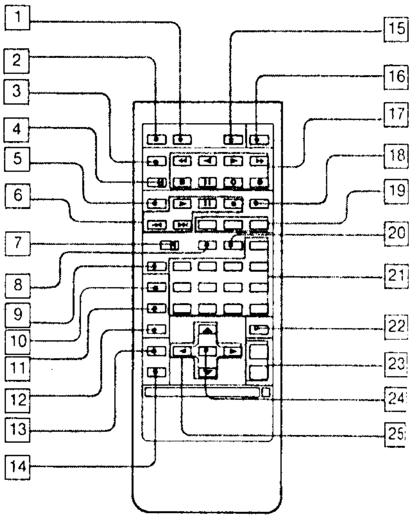
B



## Remote Commander C

1 TIMER SELECT button (110)
2 CLOCK DISPLAY button ⑳
3 Cassette deck select button
4 DECK A/B selector (54)
5 CD player select button
6 CD player operation buttons ㉔
7 TUNER/EQ/CD selector ㉞
8 CHECK (CD player) ㊵
   BAND (tuner) button ㊽
9 Tuner select button
10 PHONO select button ⑱
11 DAT select button ⑱
12 VIDEO select button ⑱
13 S-SUR button ㉒
14 DBFB button ㉒
15 SLEEP timer button (116)
16 SYSTEM POWER button ㉔
17 Tape operation buttons (54) (72)
18 TIME button ㉘
19 PLAY MODE buttons ㉚
20 CLEAR button ㊱
21 TUNER/EQ/CD numeric buttons ㉞
22 MEMORY button (66)
23 VOLUME +/– control buttons ㉒
24 EQ ON/OFF button (62)
25 CURSOR CONTROL buttons (64)

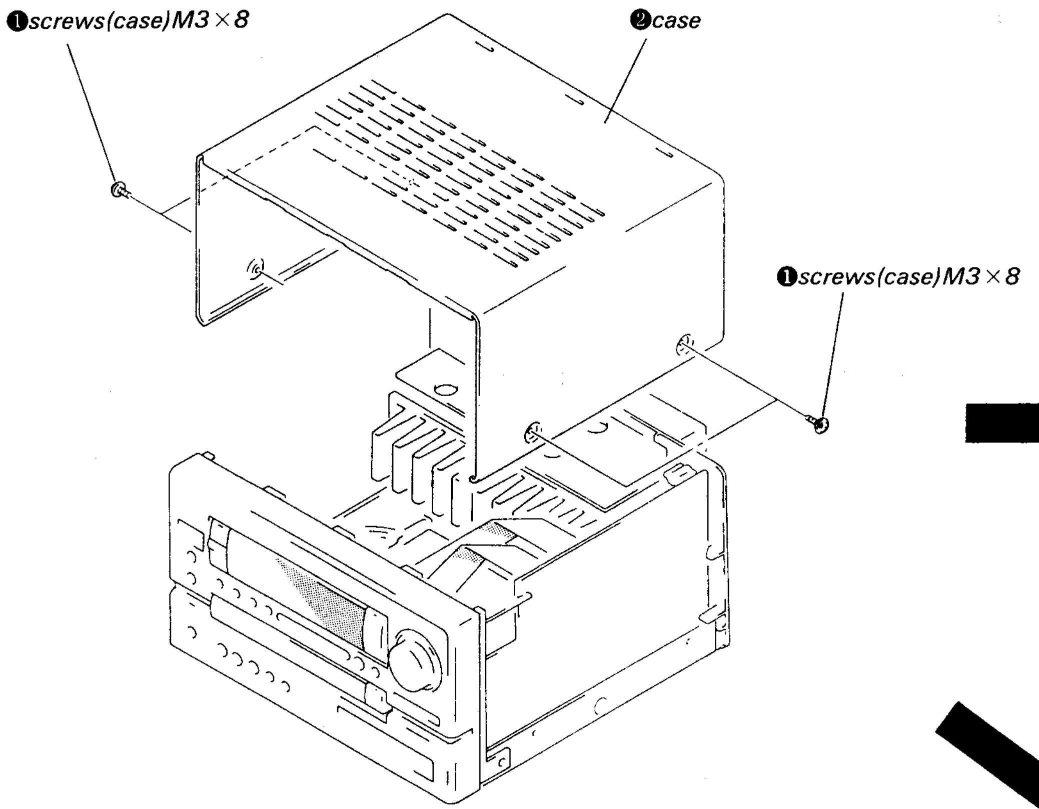
C



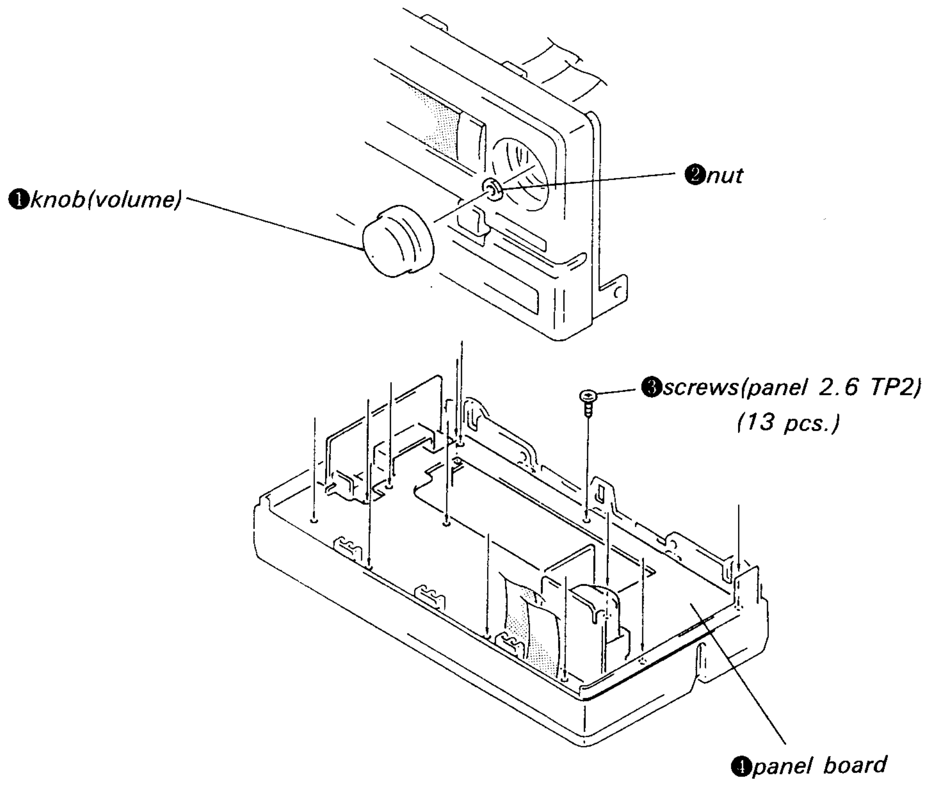
# SECTION 2
# DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

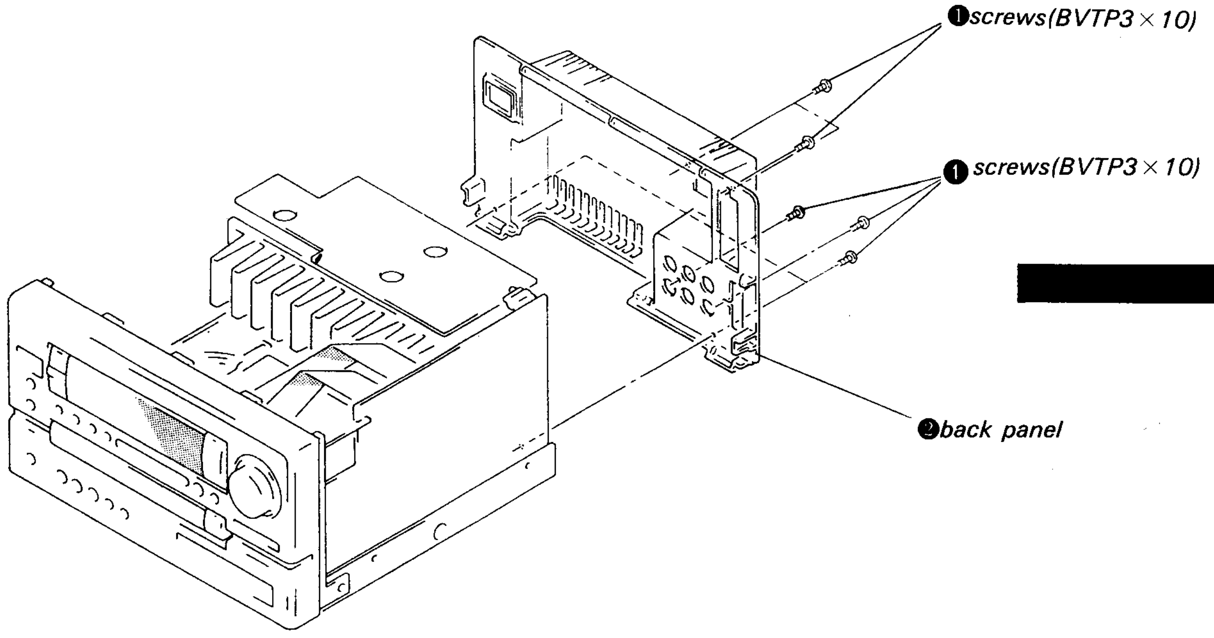
## CASE


❶screws(case)M3×8
❷case
❶screws(case)M3×8

## PANEL BOARD

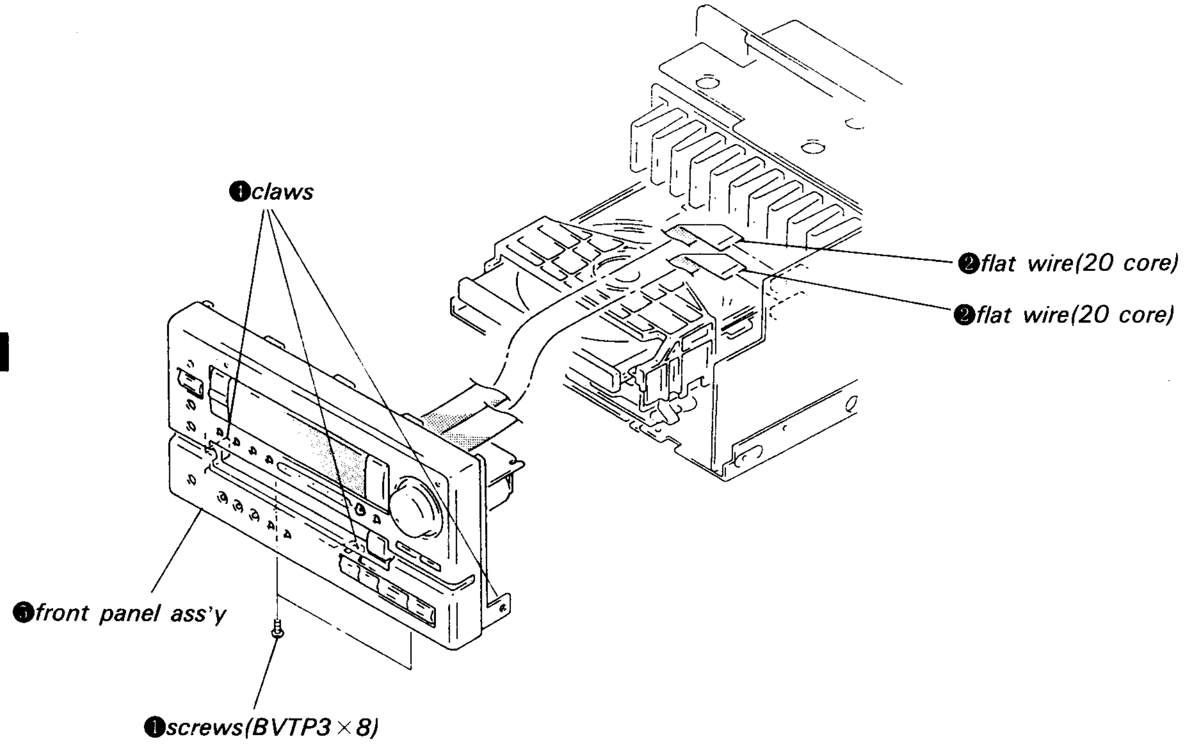

❶knob(volume)
❷nut
❸screws(panel 2.6 TP2)
(13 pcs.)
❹panel board

## BACK PANEL


❶screws(BVTP3×10)
❶ screws(BVTP3×10)
❷back panel

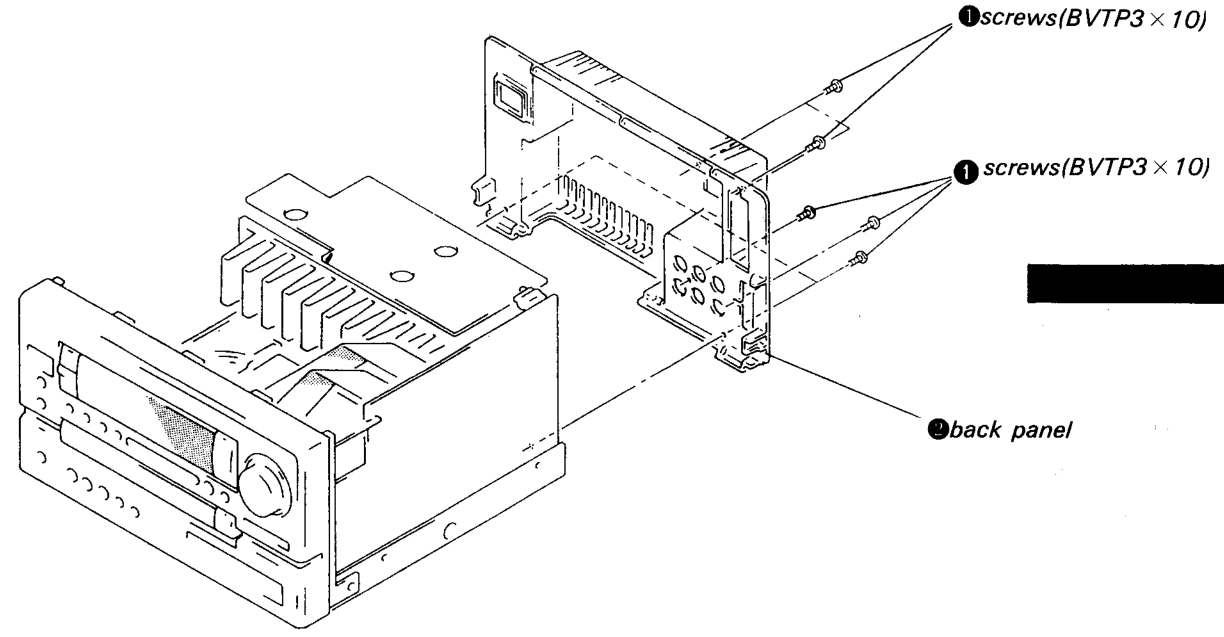
❺R
sh

## FRONT PANEL

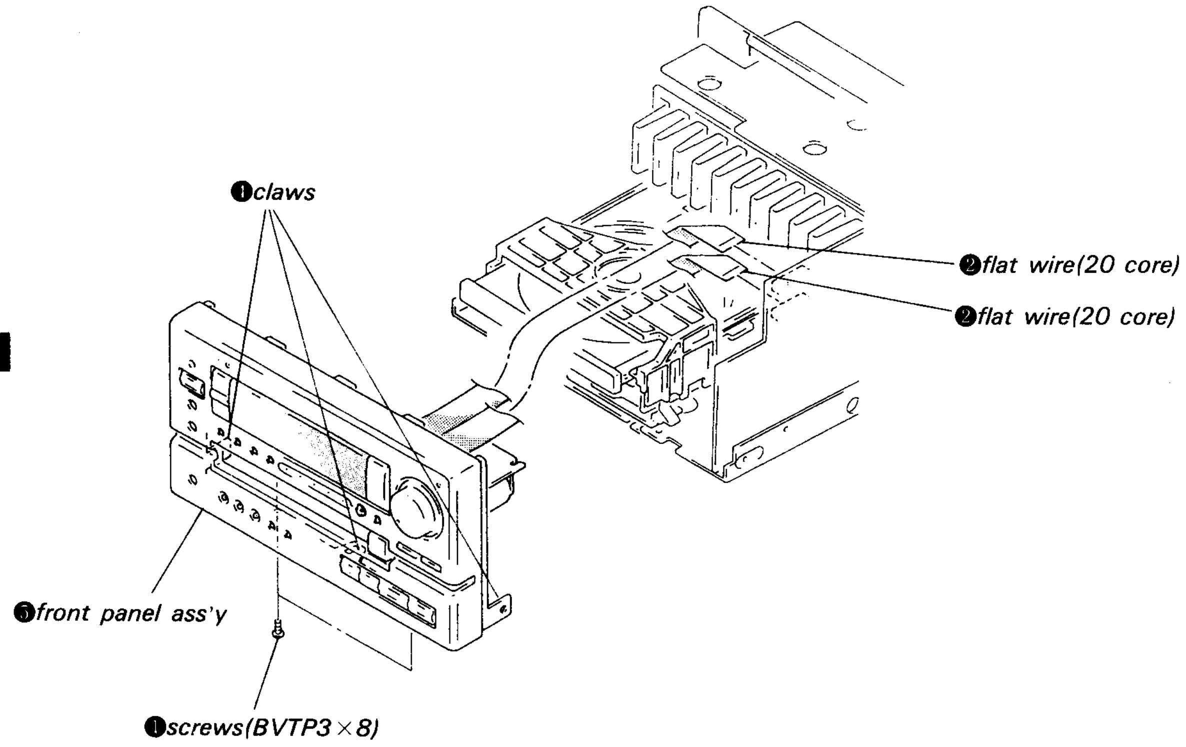

❶claws
❷flat wire(20 core)
❷flat wire(20 core)
❸front panel ass'y
❶screws(BVTP3×8)

*ase)M3 × 8*

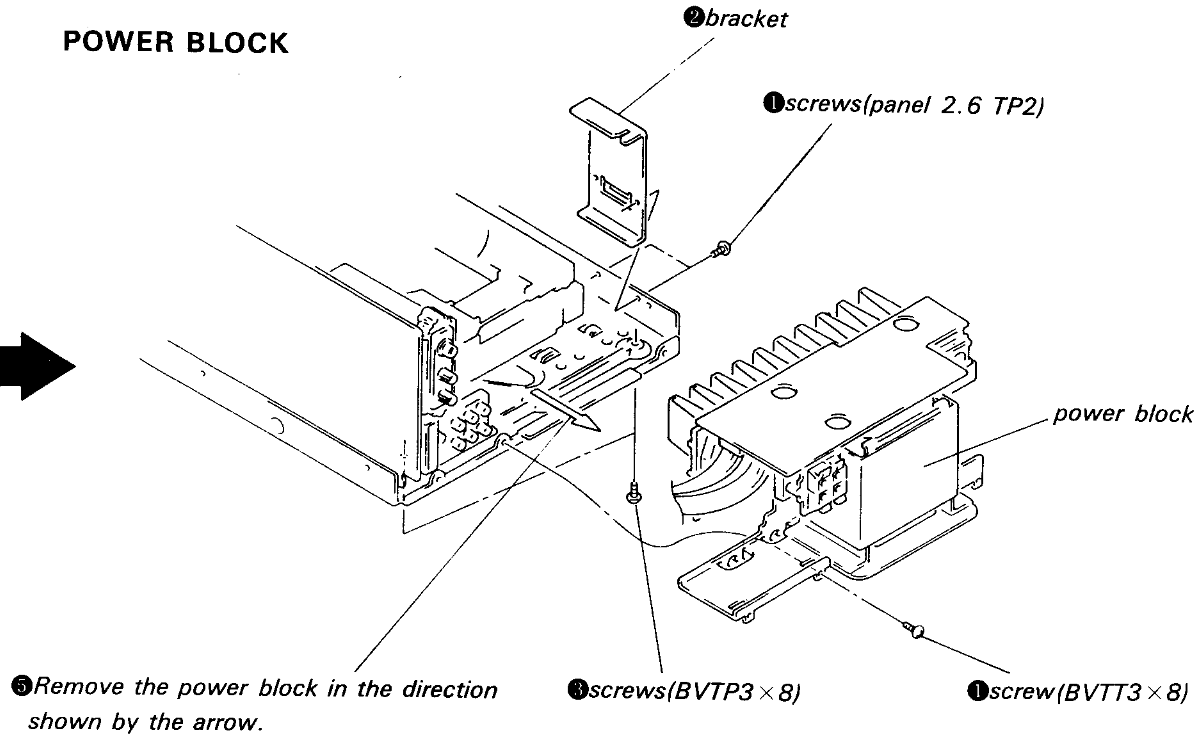
## BACK PANEL


❶screws(BVTP3 × 10)
❶screws(BVTP3 × 10)
❷back panel

## FRONT PANEL

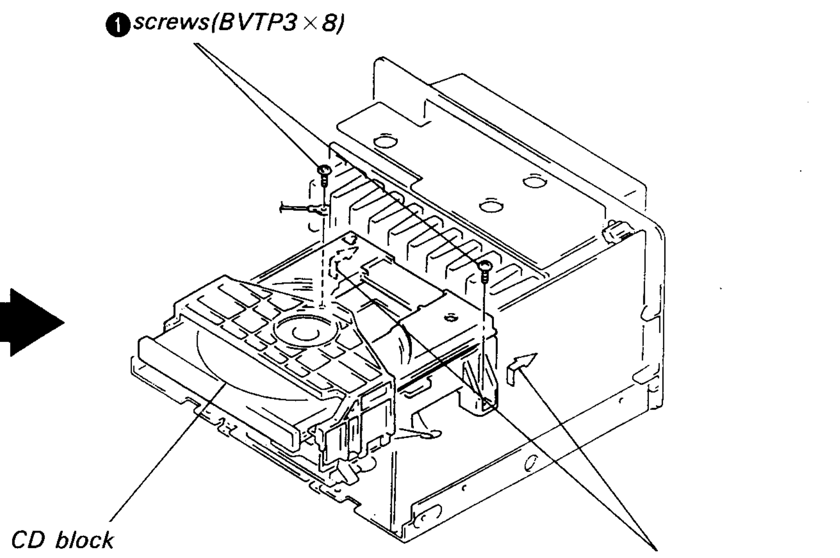

❶claws
❷flat wire(20 core)
❷flat wire(20 core)
❸front panel ass'y
❶screws(BVTP3 × 8)

## POWER BLOCK


❷bracket
❶screws(panel 2.6 TP2)
power block
❸screws(BVTP3 × 8)
❶screw(BVTT3 × 8)

❺Remove the power block in the direction shown by the arrow.

## CD BLOCK


❶screws(BVTP3 × 8)
CD block

❷Remove the CD block in the direction shown by the arrow.

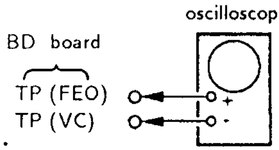
# SECTION 3
# ADJUSTMENTS
## ELECTRICAL ADJUSTMENTS

**CD SECTION**

**Note :**

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

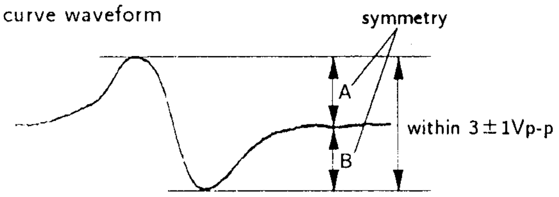
### S Curve Check



**Procedure :**

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

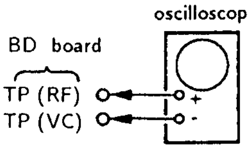
S curve waveform



5. After check, remove the lead wire connected in step 2.

**Note :** • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

### RF Level Check



**Procedure :**

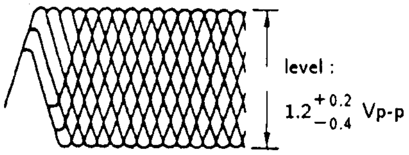
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

**Note :**

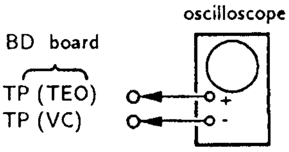
Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform

VOLT/DIV : 200mV
TIME/DIV : 500nS



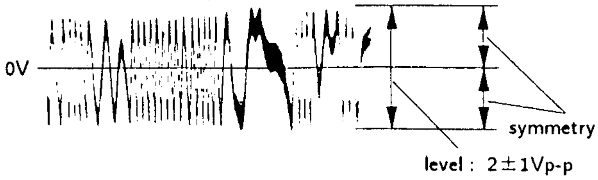
### E-F Balance Check



**Procedure :**

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

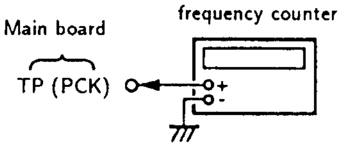


6. Remove the lead wire connected in step 1.

## RF PLL Free-run Frequency Check

**Procedure :**

1. Connect frequency counter to test point (PCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

## Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.

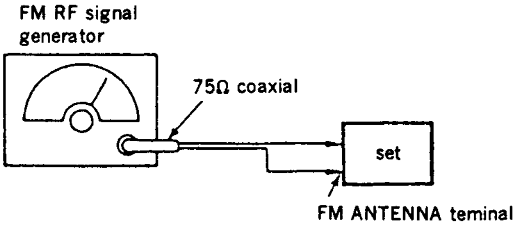
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

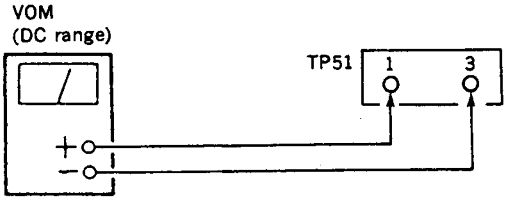
**TUNER SECTION**

### FM SECTION ADJUSTMENTS

**Setting :**



Carrier frequency : 98MHz
Modulation : 1kHz, 40kHz deviation (AEP, UK, G, IT)



### FM Discriminator Alignment (NULL Check)

Band : FM

**Procedure :**

1. Supply a 1mV (60dBμ) 98MHz signal from the ANTENNA terminal.
2. Tune the to 98MHz.
3. Adjust IFT51 for 0V reading on the VOM

**Note :** FM tuned indication lighting level adjustment should be made after FM discriminator alignment.

### FM Tuned Indication Lighting Level Adjustment

Band : FM

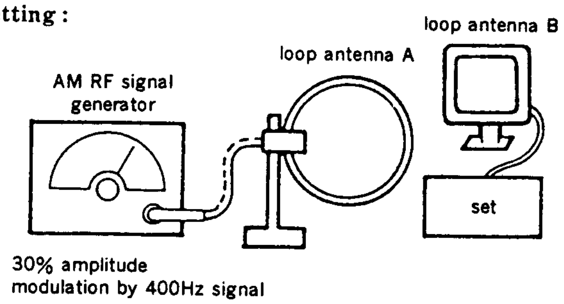
**Procedure :**

1. Supply a 22.5μV(27dBμ)(AEP,UK)or 12.5μV(22dBμ)(G,IT) 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV52 so that the TUNED light up.

**Adjustment Location:** TCB011 board

## AM SECTION ADJUSTMENTS

Setting:


loop antenna B
loop antenna A
AM RF signal generator
set
30% amplitude modulation by 400Hz signal

### MW (AM) Tuned Indication Lighting Level Adjustment

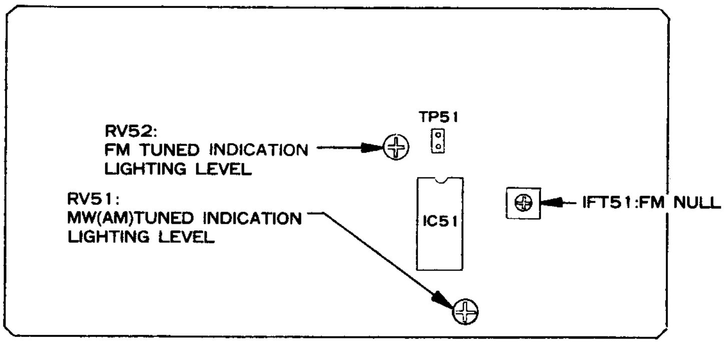
Band: MW or AM

**Procedure:**

1. Set loop antenna A so that the loop antenna B input level becomes 0.25mV (48dB$\mu$).
2. Tune the set to 1,404kHz.
3. Adjust the RV51 so that the TUNED light up.

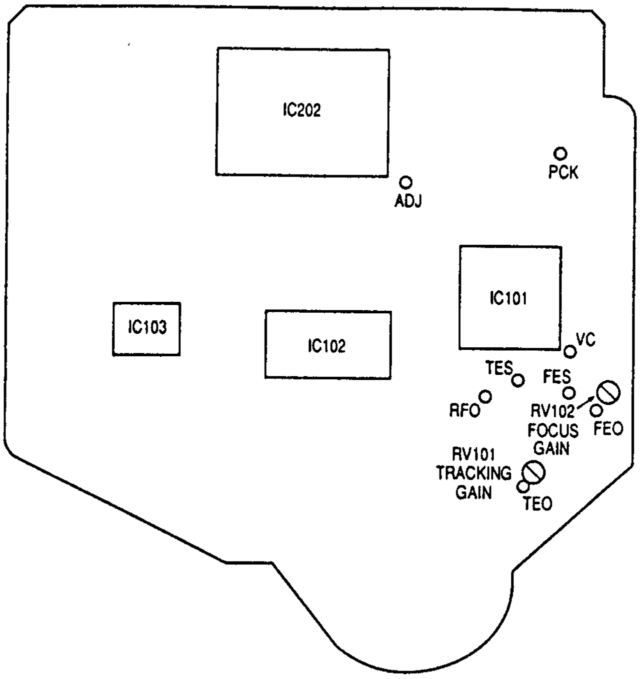
**Adjustment Location:**

### TCB011 BOARD(COMPONENT SIDE)


RV52:
FM TUNED INDICATION LIGHTING LEVEL
TP51
RV51:
MW(AM)TUNED INDICATION LIGHTING LEVEL
IC51
IFT51:FM NULL

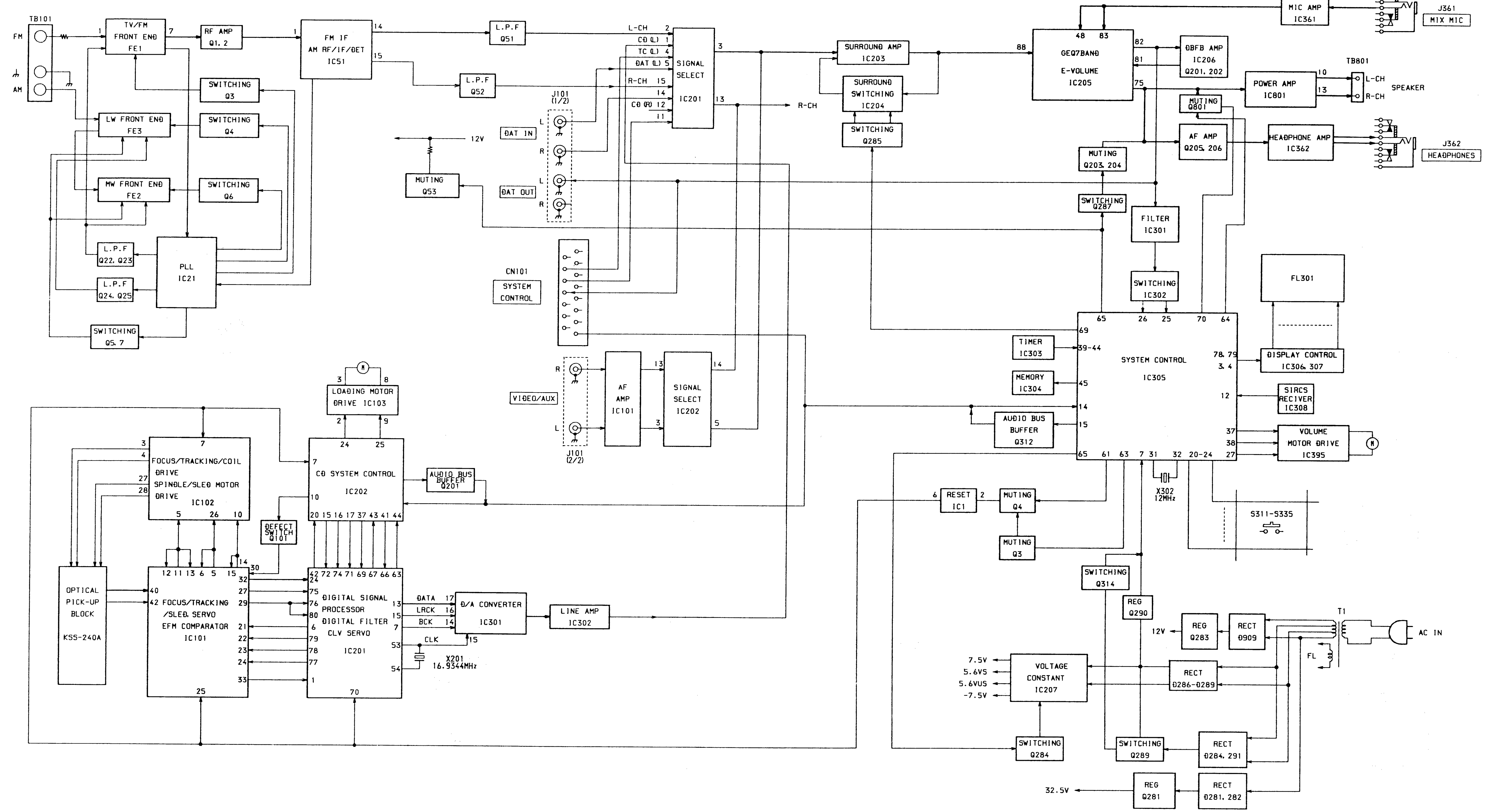
**Adjustment Location:**

### BD BOARD(CONDUCTOR SIDE)

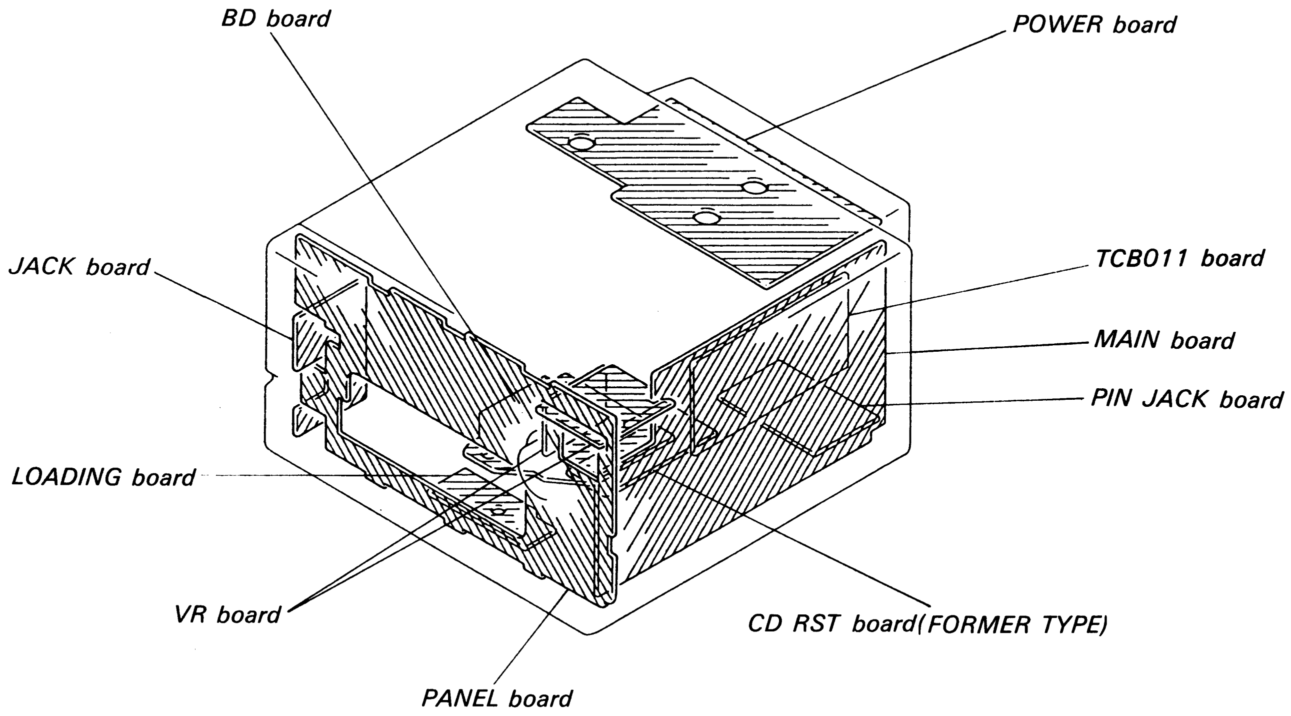

IC202
ADJ
PCK
IC101
IC103
IC102
VC
TES
FES
RFO
RV102
FOCUS GAIN
FEO
RV101
TRACKING GAIN
TEO

# SECTION 4
# DIAGRAMS

## 4-1. BLOCKDIAGRAM

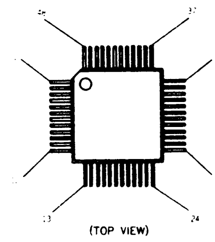

TB101
FM
AM
TV/FM FRONT END FE1
RF AMP Q1, 2
FM IF AM RF/IF/DET IC51
SWITCHING Q3
LW FRONT END FE3
SWITCHING Q4
MW FRONT END FE2
SWITCHING Q6
L.P.F Q22, Q23
L.P.F Q24, Q25
PLL IC21
SWITCHING Q5, 7
L.P.F Q51
L.P.F Q52
12V
MUTING Q53
DAT IN
DAT OUT
J101 (1/2)
L-CH
CD (L)
TC (L)
DAT (L)
R-CH
CD (R)
SIGNAL SELECT IC201
R-CH
CN101
SYSTEM CONTROL
VIDEO/AUX
J101 (2/2)
AF AMP IC101
SIGNAL SELECT IC202
SURROUND AMP IC203
SURROUND SWITCHING IC204
SWITCHING Q285
GEQ7BAND E-VOLUME IC205
DBFB AMP IC206 Q201, 202
MUTING Q801
AF AMP Q205, 206
MUTING Q203, 204
SWITCHING Q287
FILTER IC301
SWITCHING IC302
MIC AMP IC361
J361 MIX MIC
POWER AMP IC801
TB801
L-CH
R-CH
SPEAKER
HEADPHONE AMP IC362
J362 HEADPHONES
FL301
DISPLAY CONTROL IC306, 307
TIMER IC303
MEMORY IC304
AUDIO BUS BUFFER Q312
SYSTEM CONTROL IC305
SIRCS RECIVER IC308
VOLUME MOTOR DRIVE IC395
X302 12MHz
S311-S335
RESET IC1
MUTING Q4
MUTING Q3
SWITCHING Q314
REG Q290
12V
REG Q283
RECT D909
T1
AC IN
FL
7.5V
5.6VS
5.6VUS
-7.5V
VOLTAGE CONSTANT IC207
RECT D286-D289
SWITCHING Q284
SWITCHING Q289
RECT D284, 291
32.5V
REG Q281
RECT D281, 282
LOADING MOTOR DRIVE IC103
FOCUS/TRACKING/COIL DRIVE SPINDLE/SLED MOTOR DRIVE IC102
CD SYSTEM CONTROL IC202
AUDIO BUS BUFFER Q201
DEFECT SWITCH Q101
OPTICAL PICK-UP BLOCK KSS-240A
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR IC101
DIGITAL SIGNAL PROCESSOR DIGITAL FILTER CLV SERVO IC201
DATA
LRCK
BCK
CLK
X201 16.9344MHz
D/A CONVERTER IC301
LINE AMP IC302

## 4-2. CIRCUIT BOARDS LOCATION

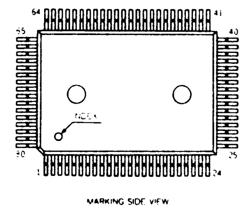

BD board
POWER board
JACK board
TCB011 board
MAIN board
PIN JACK board
LOADING board
VR board
CD RST board(FORMER TYPE)
PANEL board

## 4-3. SEMICONDUCTOR LEAD LAYOUTS

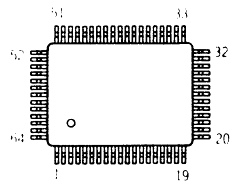
**CXA1372Q**



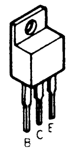
**CXD2505Q**
**µPD78134GF-032-3B9**


MARKING SIDE VIEW

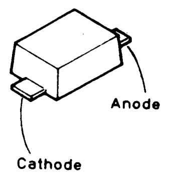
**µPD75116GF-760-3BE**


32
20
1
19
TOP VIEW

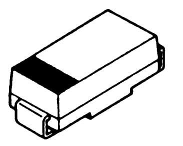
**2SD2012**



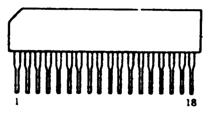
**1SS355**


Anode
Cathode

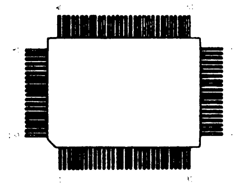
**EC10DS2**
**EC10QS-04**



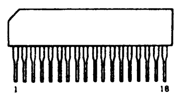
**RBA-402**



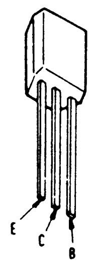
**CXA1492Q**



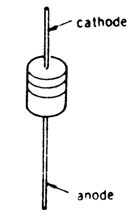
**LA5603**
**STK4132MK2**



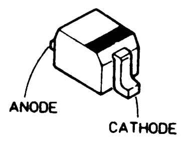
**2SA1115-EF**
**2SC2603-EF**



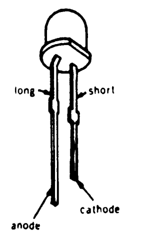
**1SS120**


cathode
anode

**DTZ12B**
**DTZ3.9B**
**DTZ33B**
**DTZ4.7C**
**DTZ5.6B**
**DTZ6.2B**


ANODE
CATHODE

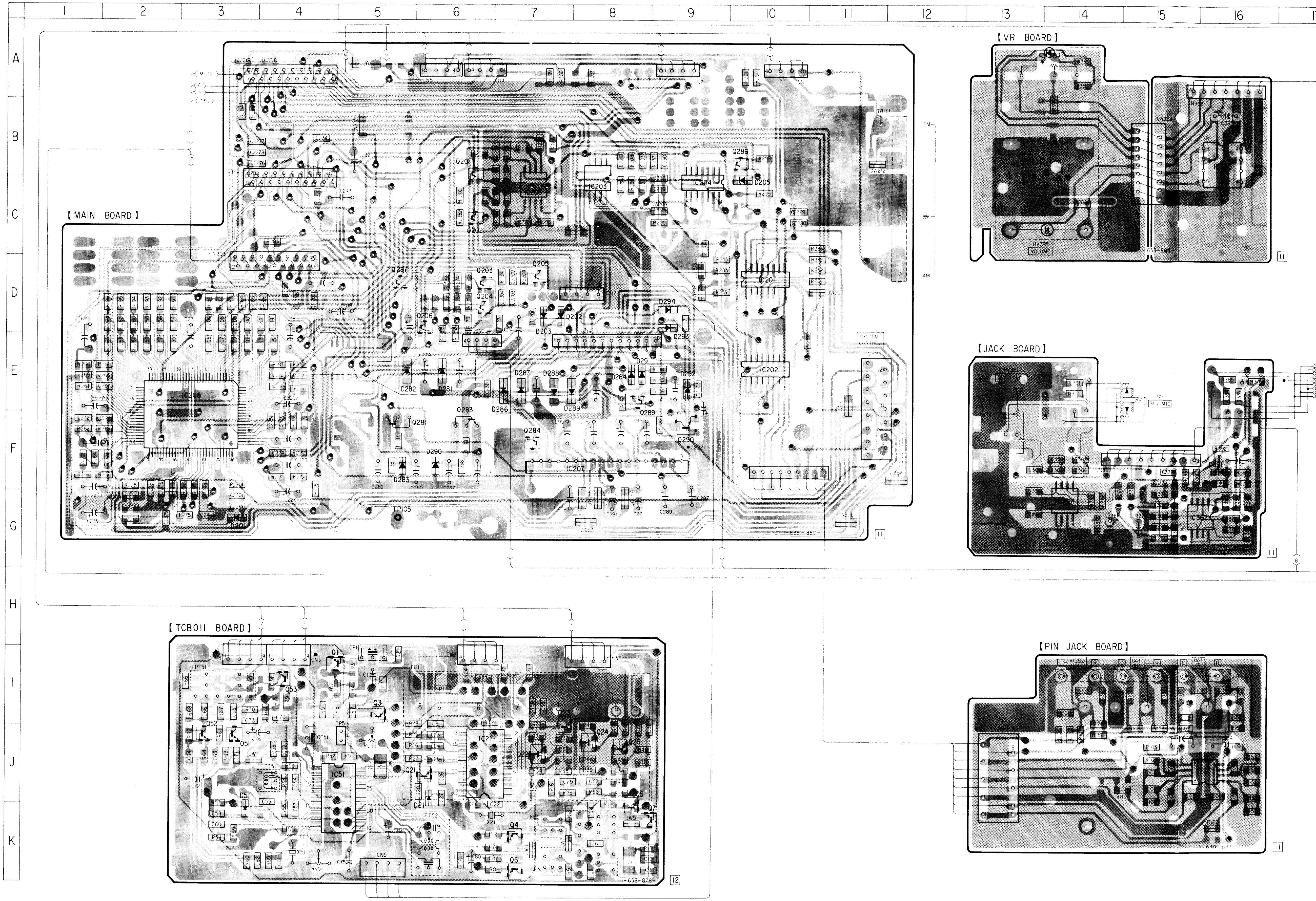
**SEL2210S**


long
short
anode
cathode

## 4-4. PRINTED WIRING BOARDS —— Audio Section(FORMER TYPE) ——

### • Semiconductor Location(FORMER TYPE)

| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D1 | H-29 | IC207 | F-7 |
| D2 | H-29 | IC301 | F-19 |
| D3 | K-29 | IC302 | F-20 |
| D21 | J-6 | IC303 | B-22 |
| D51 | K-3 | IC304 | C-21 |
| D201 | G-3 | IC305 | C-23 |
| D202 | D-7 | IC306 | B-27 |
| D203 | D-7 | IC307 | B-25 |
| D205 | C-10 | IC308 | B-29 |
| D281 | E-6 | IC309 | C-25 |
| D282 | E-5 | IC361 | G-14 |
| D283 | F-5 | IC362 | G-16 |
| D284 | E-8 | IC395 | B-16 |
| D286 | E-7 | IC801 | K-26 |
| D287 | E-7 | | |
| D288 | E-7 | Q1 (TCB011) | I-5 |
| D289 | E-7 | Q1 (CD RST) | H-30 |
| D290 | F-6 | Q2 (TCB011) | I-4 |
| D291 | E-8 | Q2 (CD RST) | H-29 |
| D292 | E-9 | Q3 | I-5 |
| D293 | D-9 | Q4 | K-7 |
| D294 | D-9 | Q5 | J-8 |
| D301 | E-19 | Q6 | K-7 |
| D302 | F-19 | Q7 | K-9 |
| D311 | C-24 | Q21 | I-6 |
| D312 | D-19 | Q22 | J-7 |
| D313 | F-29 | Q23 | J-7 |
| D314 | C-22 | Q24 | J-8 |
| D316 | D-20 | Q25 | J-8 |
| D317 | D-18 | Q51 | J-3 |
| D318 | A-28 | Q52 | J-3 |
| D319 | D-25 | Q53 | I-4 |
| D320 | D-25 | Q201 | B-6 |
| D321 | D-24 | Q202 | C-6 |
| D322 | D-23 | Q203 | D-6 |
| D323 | D-23 | Q204 | D-6 |
| D324 | E-20 | Q205 | D-7 |
| D325 | E-20 | Q206 | D-6 |
| D326 | B-21 | Q281 | F-5 |
| D327 | C-22 | Q283 | F-6 |
| D328 | C-22 | Q284 | F-7 |
| D329 | E-20 | Q286 | B-10 |
| D330 | G-20 | Q287 | D-5 |
| D331 | D-19 | Q289 | E-8 |
| D391 | F-16 | Q290 | F-9 |
| D801 | J-27 | Q311 | C-26 |
| D909 | I-24 | Q312 | B-24 |
| | | Q313 | D-20 |
| IC1 | J-30 | Q314 | B-22 |
| IC2 | I-29 | Q801 | J-28 |
| IC21 | J-6 | | |
| IC51 | J-5 | | |
| IC101 | J-16 | | |
| IC201 | D-10 | | |
| IC202 | E-10 | | |
| IC203 | C-8 | | |
| IC204 | C-9 | | |
| IC205 | E-3 | | |
| IC206 | C-7 | | |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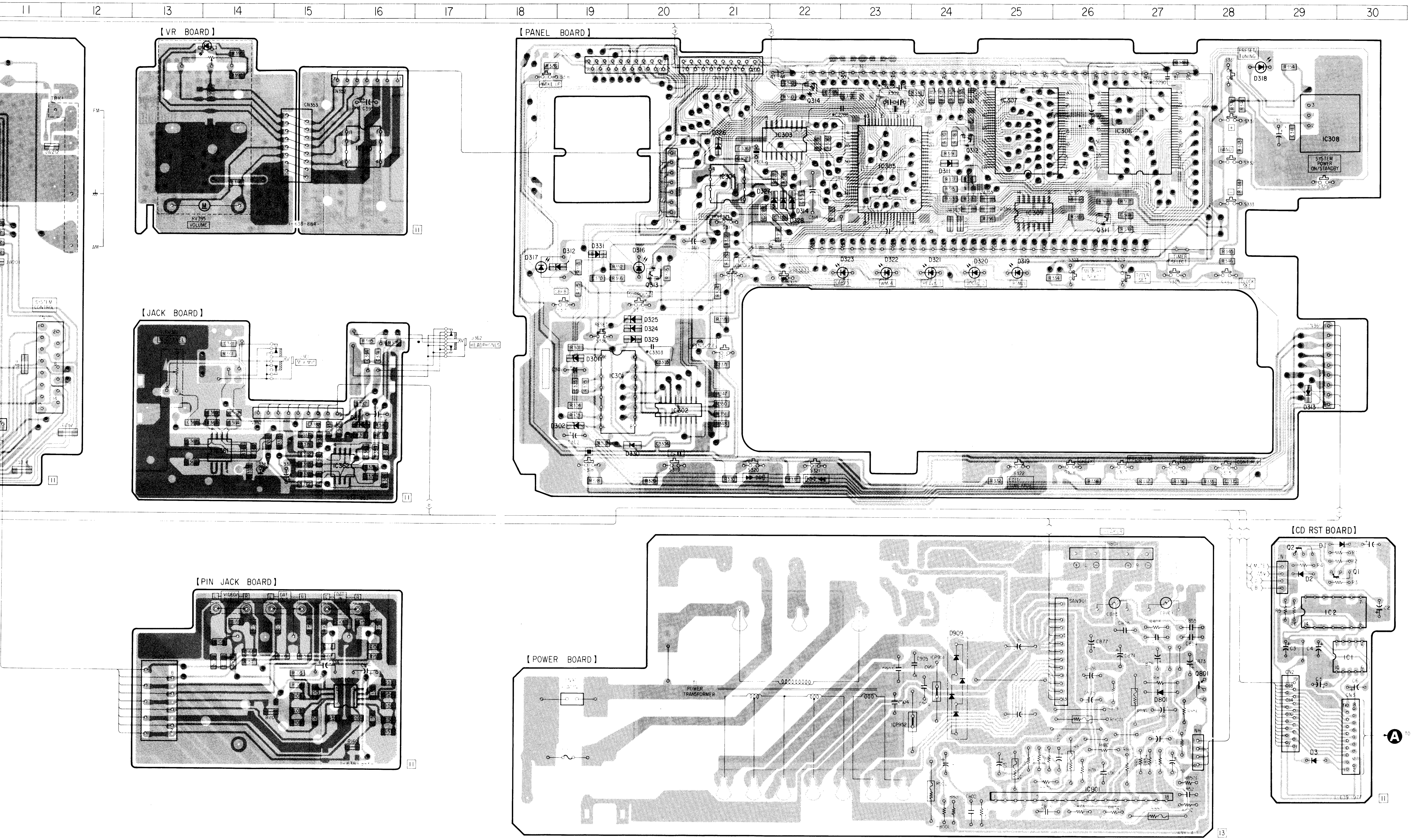
16
A
B
C
D
E
F
G
H
I
J
K
【MAIN BOARD】
【VR BOARD】
【JACK BOARD】
【TCB011 BOARD】
【PIN JACK BOARD】
IC201
IC202
IC203
IC204
IC205
IC207
IC21
IC51
IC362
Q201
Q202
Q203
Q204
Q205
Q206
Q281
Q283
Q284
Q286
Q287
Q289
Q290
D202
D203
D205
D281
D282
D283
D284
D286
D287
D288
D289
D290
D291
D292
D293
D294
D201
Q1
Q3
Q4
Q6
Q21
Q22
Q24
Q51
Q52
Q53
D51
TP105
RV395
VOLUME
CN351
CN2
CN3
CN5
LPF51
FM
AM
11
12

11
12
13
14
15
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17
18
19
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21
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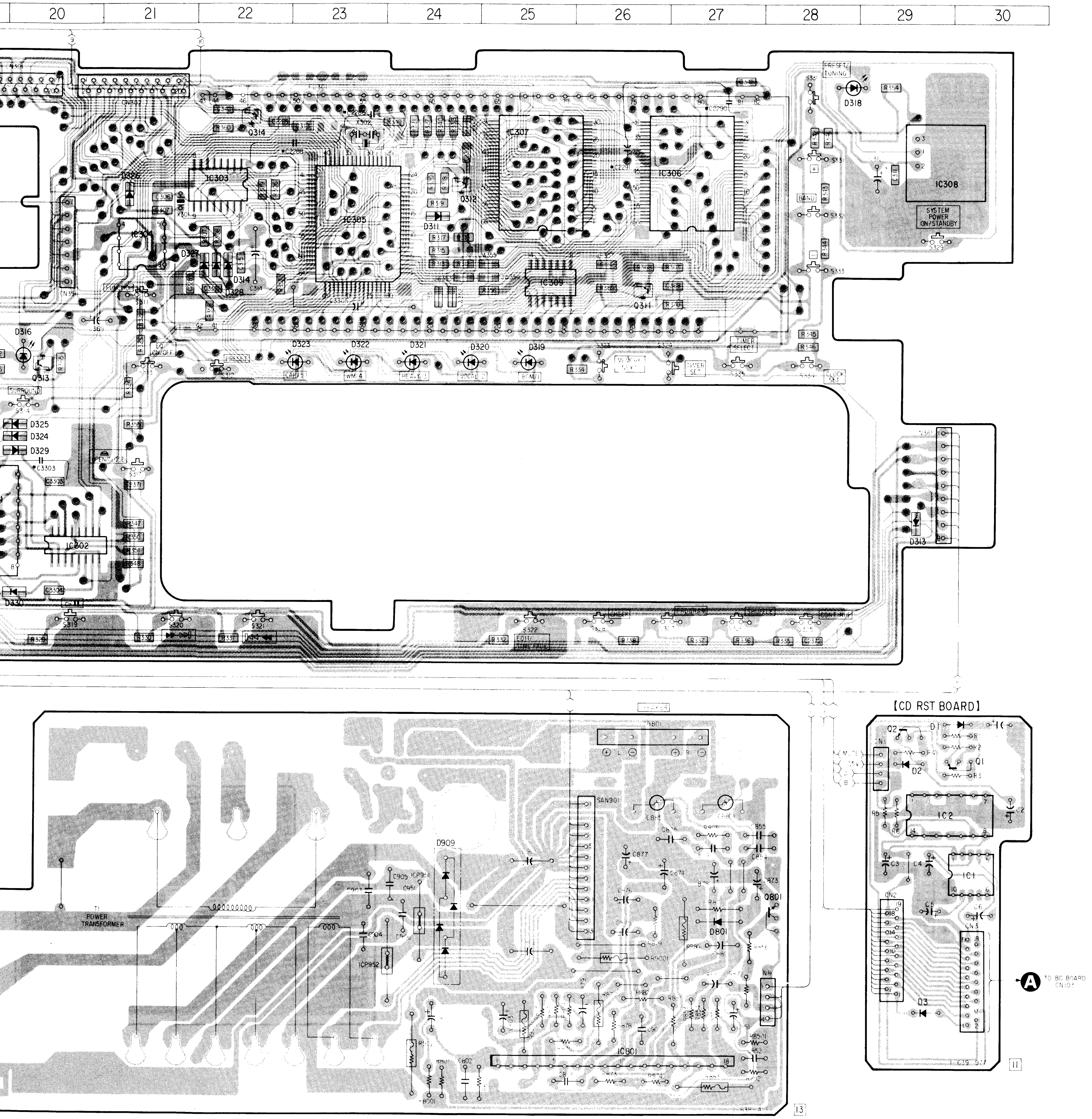
23
24
25
26
27
28
29
30
【VR BOARD】
RV395
VOLUME
CN353
【JACK BOARD】
J162
HEADPHONES
IC352
【PIN JACK BOARD】
VIDEO
DAT
【PANEL BOARD】
WAKE UP
IC303
IC305
IC307
IC306
IC308
IC309
IC304
IC301
IC302
PRESET/TUNING
D318
BAND
SYSTEM POWER ON/STANDBY
D317
D312
D331
D316
D313
D323
D322
D321
D320
D319
D325
D324
D329
D330
D301
D302
TIMER SELECT
CLOCK SET
RESET
EDIT/TIME FADE
CONTINUE
【POWER BOARD】
POWER TRANSFORMER
D909
IC801
Q801
D801
SAN901
【CD RST BOARD】
IC1
IC2
Q1
Q2
D1
D2
D3
CN1
CN2
CN3
A
TO BD BOARD CN103


20
21
22
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24
25
26
27
28
29
30
IC303
IC305
IC307
IC306
IC308
IC309
IC304
IC302
D318
PRESET/TUNING
SYSTEM POWER ON/STANDBY
D323
D322
D321
D320
D319
D316
D313
D325
D324
D329
D330
D311
D312
D314
S319
S320
S321
S322
S333
TIMER SELECT
TIMER SET
CLOCK SET
EDIT/
BAND
T1 POWER TRANSFORMER
D909
IC P952
SAN901
IC801
Q801
D801
[CD RST BOARD]
IC1
IC2
Q1
Q2
D1
D2
D3
CN1
CN2
CN3
A
TO BD BOARD CN103
11
13

**Note:**

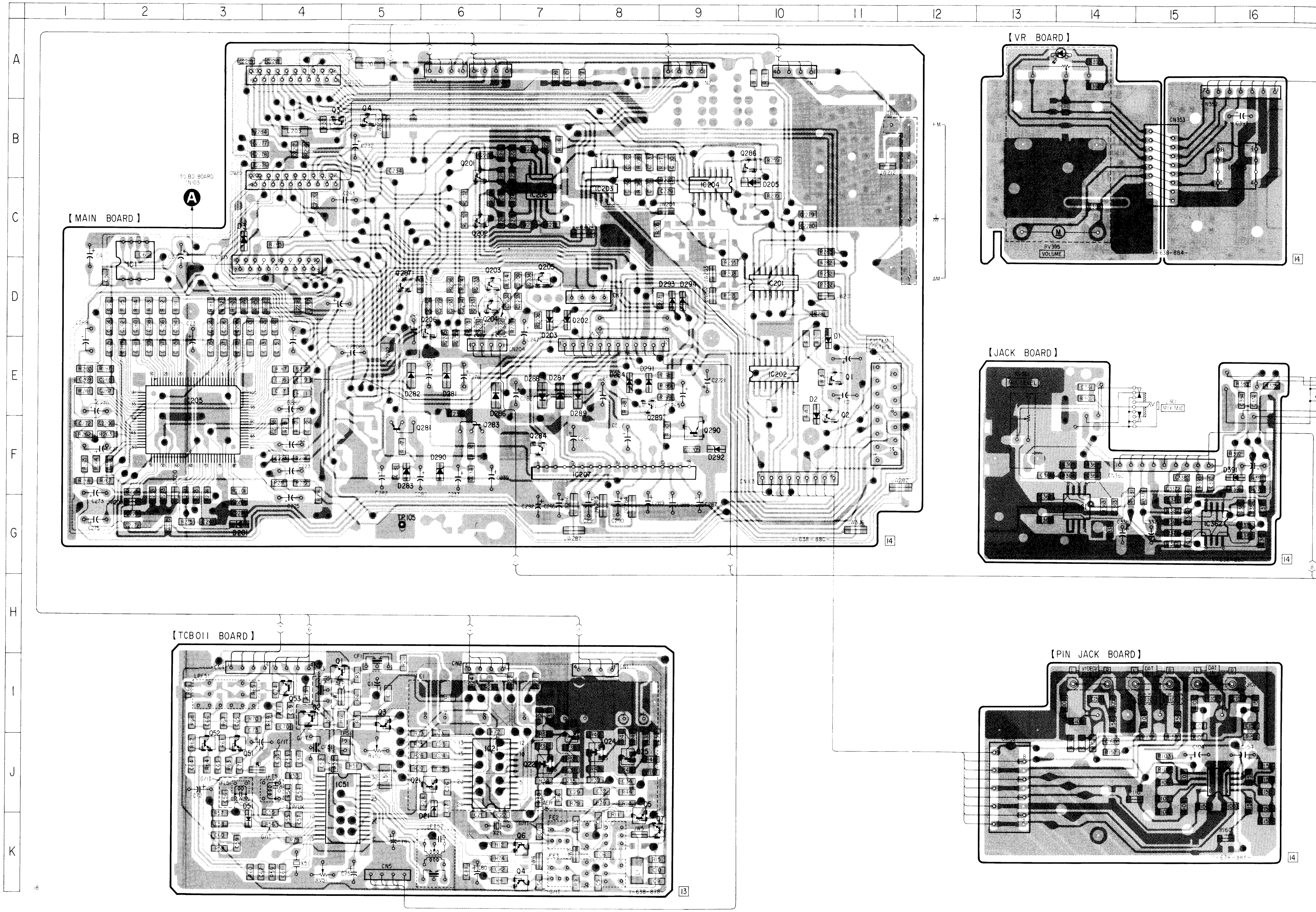
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

FORMER TYPE : AEP, UK

## 4-5. PRINTED WIRING BOARDS —— Audio Section (NEW TYPE)

### • Semiconductor Location(NEW TYPE)

| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D1 | D-11 | IC301 | F-19 |
| D2 | E-11 | IC302 | F-20 |
| D3 | C-3 | IC303 | B-22 |
| D21 | J-6 | IC304 | C-21 |
| D51 | K-3 | IC305 | C-23 |
| D201 | G-3 | IC306 | B-27 |
| D202 | D-7 | IC307 | B-25 |
| D203 | D-7 | IC308 | B-29 |
| D205 | C-10 | IC309 | C-25 |
| D281 | E-6 | IC361 | G-14 |
| D282 | E-5 | IC362 | G-16 |
| D283 | F-5 | IC395 | B-16 |
| D284 | E-8 | IC801 | K-26 |
| D286 | E-6 | | |
| D287 | E-7 | Q1 (TCB011) | I-5 |
| D288 | E-7 | Q1 (MAIN) | E-11 |
| D289 | E-7 | Q2 (TCB011) | I-4 |
| D290 | F-6 | Q2 (MAIN) | E-11 |
| D291 | E-8 | Q3 (TCB011) | I-5 |
| D292 | F-9 | Q3 (MAIN) | B-4 |
| D293 | D-9 | Q4 (TCB011) | K-7 |
| D294 | D-9 | Q4 (MAIN) | B-5 |
| D301 | E-19 | Q5 | J-8 |
| D302 | F-19 | Q6 | K-7 |
| D311 | C-24 | Q7 | K-9 |
| D312 | D-19 | Q21 | J-6 |
| D313 | F-29 | Q22 | J-7 |
| D314 | C-22 | Q23 | J-7 |
| D316 | D-20 | Q24 | J-8 |
| D317 | D-18 | Q25 | J-8 |
| D318 | A-28 | Q51 | J-3 |
| D319 | D-25 | Q52 | J-3 |
| D320 | D-25 | Q53 | I-4 |
| D321 | D-24 | Q201 | B-6 |
| D322 | D-23 | Q202 | C-6 |
| D323 | D-23 | Q203 | D-6 |
| D324 | E-20 | Q204 | D-6 |
| D325 | E-20 | Q205 | D-7 |
| D326 | B-21 | Q206 | D-6 |
| D327 | C-21 | Q281 | F-5 |
| D328 | C-22 | Q283 | E-6 |
| D329 | E-20 | Q284 | F-7 |
| D330 | G-20 | Q286 | B-10 |
| D331 | D-19 | Q287 | D-5 |
| D391 | F-16 | Q289 | E-8 |
| D801 | J-27 | Q290 | F-9 |
| D909 | I-24 | Q311 | C-26 |
| | | Q312 | B-24 |
| IC1 | D-2 | Q313 | D-20 |
| IC21 | J-6 | Q314 | B-22 |
| IC51 | J-5 | Q801 | J-28 |
| IC101 | J-16 | | |
| IC201 | D-10 | | |
| IC202 | E-10 | | |
| IC203 | C-8 | | |
| IC204 | C-9 | | |
| IC205 | E-3 | | |
| IC206 | C-7 | | |
| IC207 | F-7 | | |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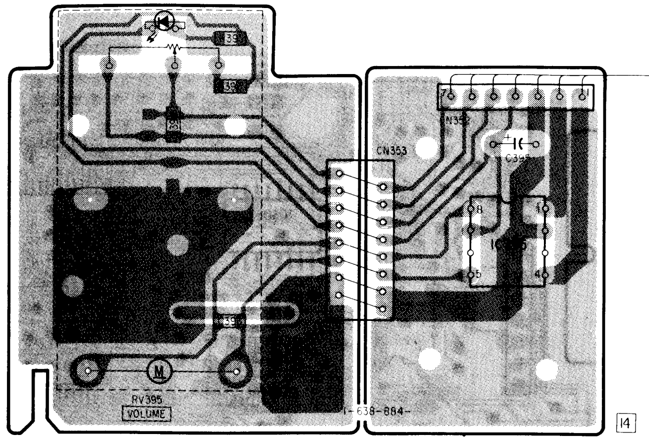
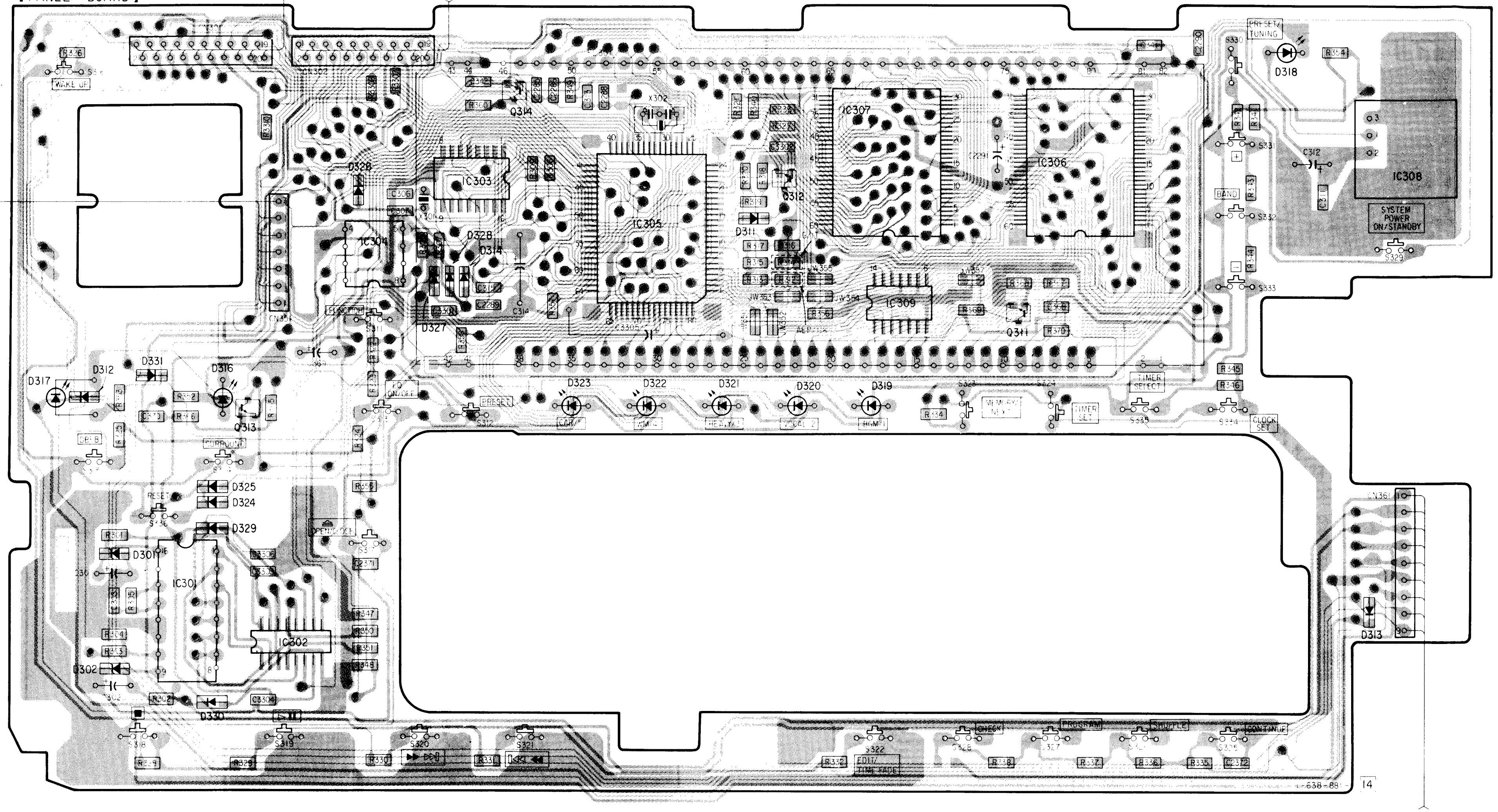
15
16
A
B
C
D
E
F
G
H
I
J
K
【MAIN BOARD】
TO BD BOARD CN103
A
IC1
IC205
IC206
IC203
IC204
IC201
IC202
IC207
Q201
Q202
Q203
Q204
Q205
Q206
Q281
Q283
Q284
Q286
Q287
Q289
Q290
D202
D203
D205
D281
D282
D283
D286
D287
D288
D289
D290
D291
D292
D293
D294
D1
D2
Q1
Q2
Q3
Q4
TP105
1-638-89C-
14
【VR BOARD】
RV395
VOLUME
1-638-884-
14
【JACK BOARD】
MIC
IC362
D391
14
【PIN JACK BOARD】
VIDEO
DAT
1-638-884-
14
【TCB011 BOARD】
Q1
Q3
Q4
Q5
Q6
Q21
Q22
Q24
Q51
Q52
Q53
IC21
IC51
D51
CN2
CN5
1-638-878-
13

13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

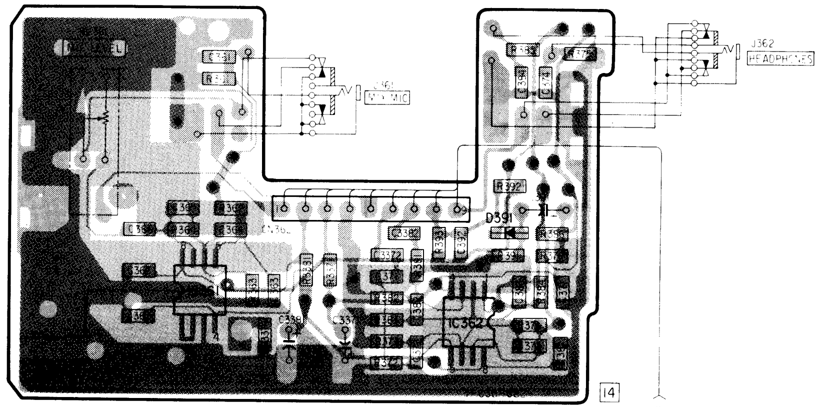
【VR BOARD】


CN353
CN352
RV395
VOLUME
14

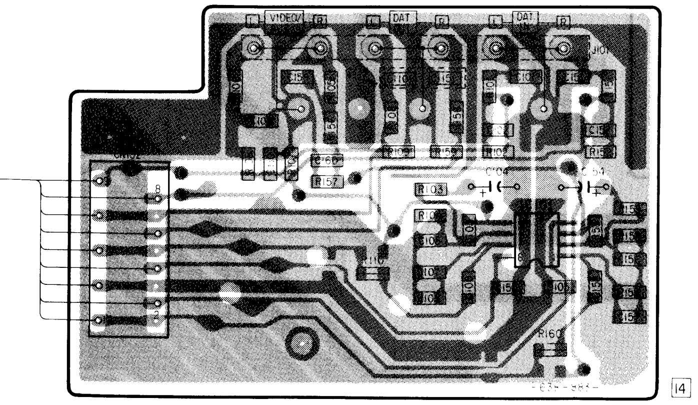
【PANEL BOARD】


WAKE UP
IC303
IC305
IC307
IC306
IC308
IC304
IC309
IC301
IC302
D318
PRESET TUNING
SYSTEM POWER ON/STANDBY
BAND
D317
D312
D331
D316
D313
D323
D322
D321
D320
D319
D325
D324
D329
D301
D302
D330
D327
D328
D314
Q314
Q312
Q311
D311
TIMER SELECT
TIMER SET
CLOCK SET
MEMORY
PRESET
RESET
EDIT/TIME FADE
CN361
D313
14

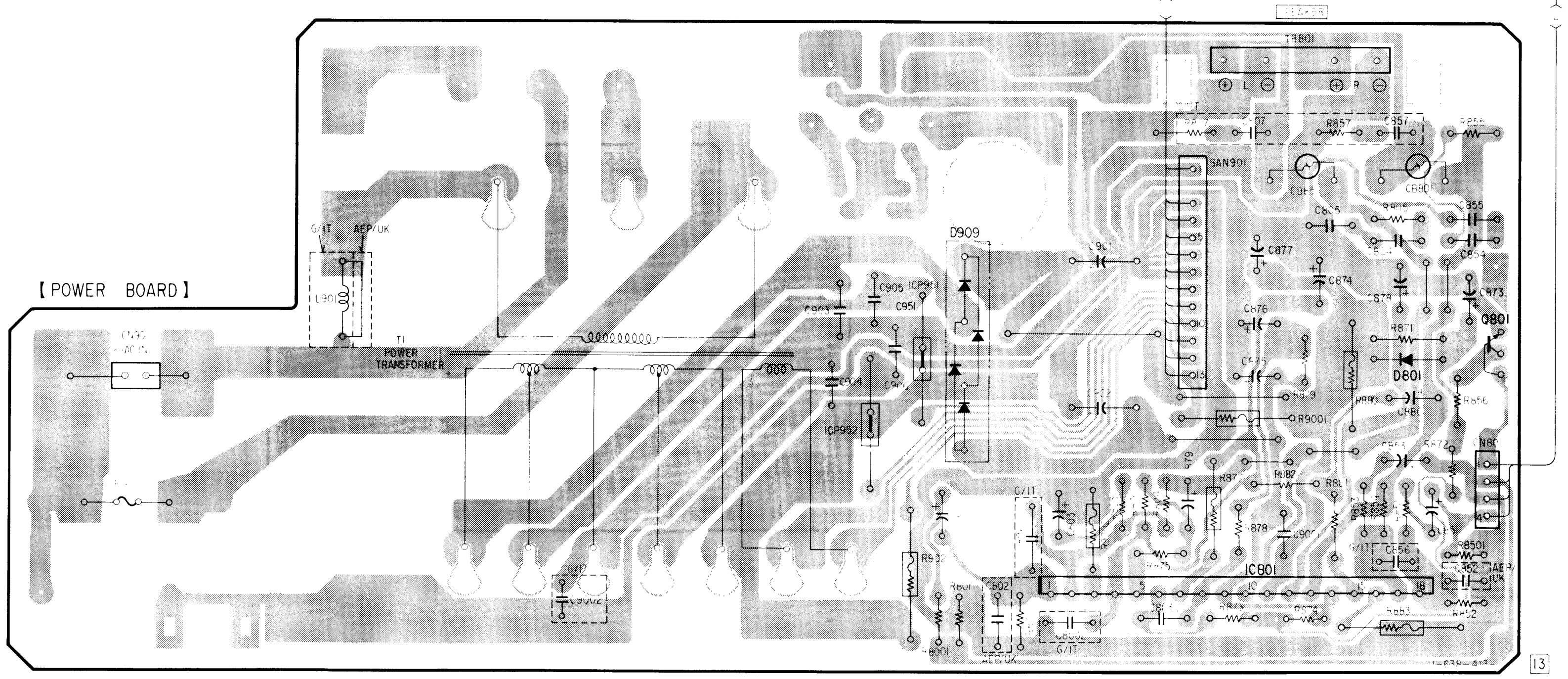
【JACK BOARD】


J362
HEADPHONES
D391
IC362
14

【PIN JACK BOARD】


VIDEO
DAT
DAT
R160
14

【POWER BOARD】

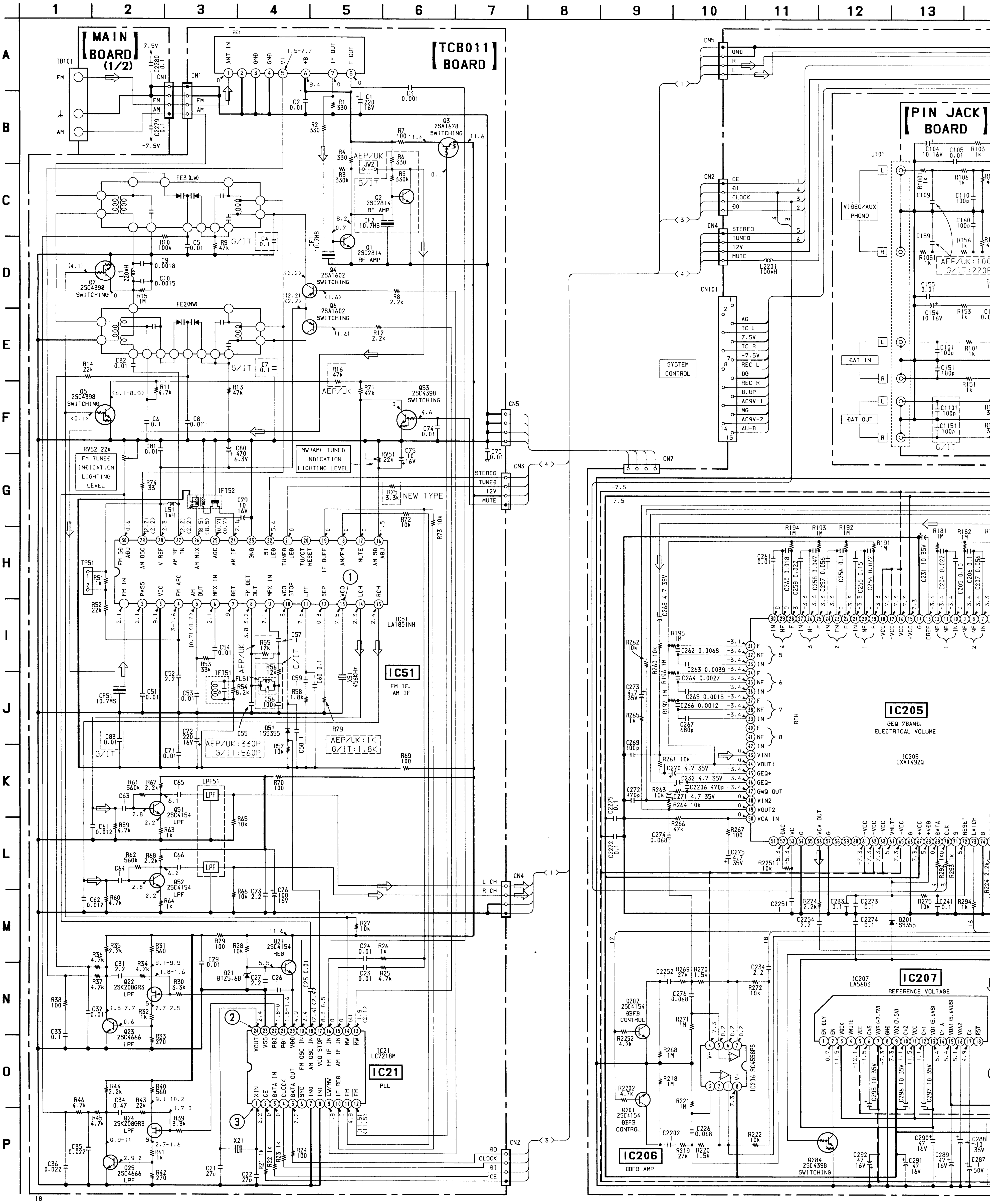

TB801
SAN901
D909
ICP954
ICP952
C905
C904
C877
C874
C876
T1
POWER TRANSFORMER
AEP/UK
L901
Q801
D801
C873
IC901
R857
R855
R900
R878
R882
R881
13

Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ⏛ : fusible resistor.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ━━ : B+ Line
- ━ ━ : B– Line
- ☐ : adjustment for repair.

## 4-6. SCHEMATIC DIAGRAM —— Audio Section——



MAIN BOARD (1/2)
TCB011 BOARD
PIN JACK BOARD
IC51 FM IF, AM IF
IC51 LA1851NM
IC21 LC7218M
IC21 PLL
IC205 GEQ 7BAND, ELECTRICAL VOLUME
IC205 CXA1492Q
IC206 BBFB AMP
IC206 RC4558PS
IC207 LA5603
IC207 REFERENCE VOLTAGE
FE1
FE3 (LW)
FE2 (MW)
Q1 2SC2814 RF AMP
Q2 2SC2814 RF AMP
Q3 2SA1678 SWITCHING
Q4 2SA1602 SWITCHING
Q6 2SA1602 SWITCHING
Q5 2SC4398 SWITCHING
Q7 2SC4398 SWITCHING
Q53 2SC4398 SWITCHING
Q51 2SC4154 LPF
Q52 2SC4154 LPF
Q21 2SC4154 REG
Q22 2SK208GR3 LPF
Q23 2SC4666 LPF
Q24 2SK208GR3 LPF
Q25 2SC4666 LPF
Q201 2SC4154 BBFB CONTROL
Q202 2SC4154 BBFB CONTROL
Q284 2SC4398 SWITCHING
D21 DTZ5.6B
D51 1SS355
D201 1SS355
CF1 10.7MS
CF2 10.7MS
CF51 10.7MS
IFT52
IFT51
FL51
LPF51
X21
X51 456kHz
RV51 22k
RV52 22k
FM TUNED INDICATION LIGHTING LEVEL
MW (AM) TUNED INDICATION LIGHTING LEVEL
AEP/UK
G/IT
AEP/UK:330P G/IT:560P
AEP/UK:1K G/IT:1.8K
AEP/UK:100 G/IT:220P
NEW TYPE
SYSTEM CONTROL
VIDEO/AUX PHONO
DAT IN
DAT OUT
J101
TB101
CN1
CN2
CN3
CN4
CN5
CN7
CN101
STEREO
TUNED
12V
MUTE
CE
DI
CLOCK
DO
L CH
R CH
GND
AG
TC L
7.5V
TC R
-7.5V
REC L
DG
REC R
B.UP
AC9V-1
MG
AC9V-2
AU-B
L2201 100μH
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
18

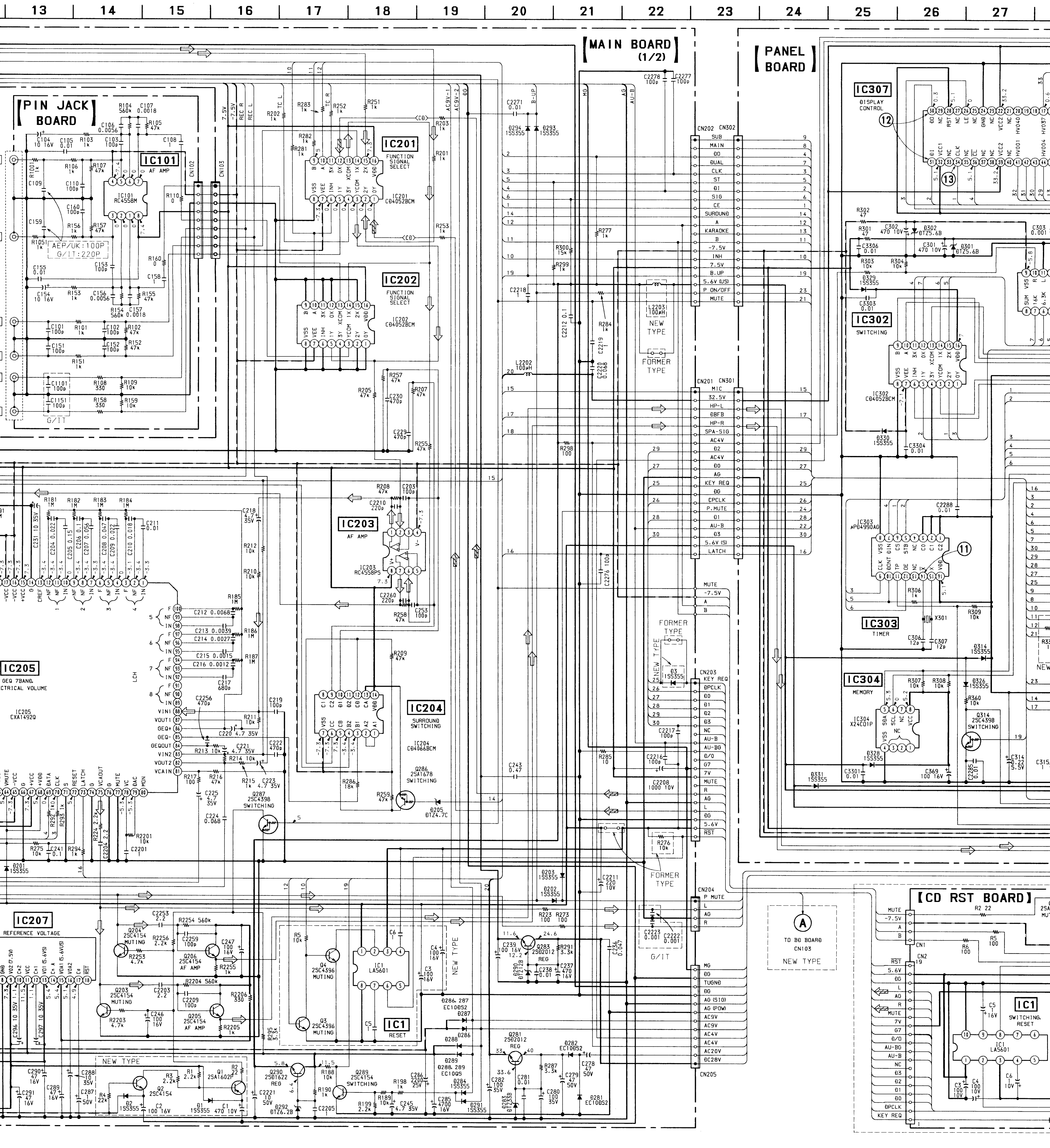
oted. pF: μμF
or electrolytics

nless otherwise

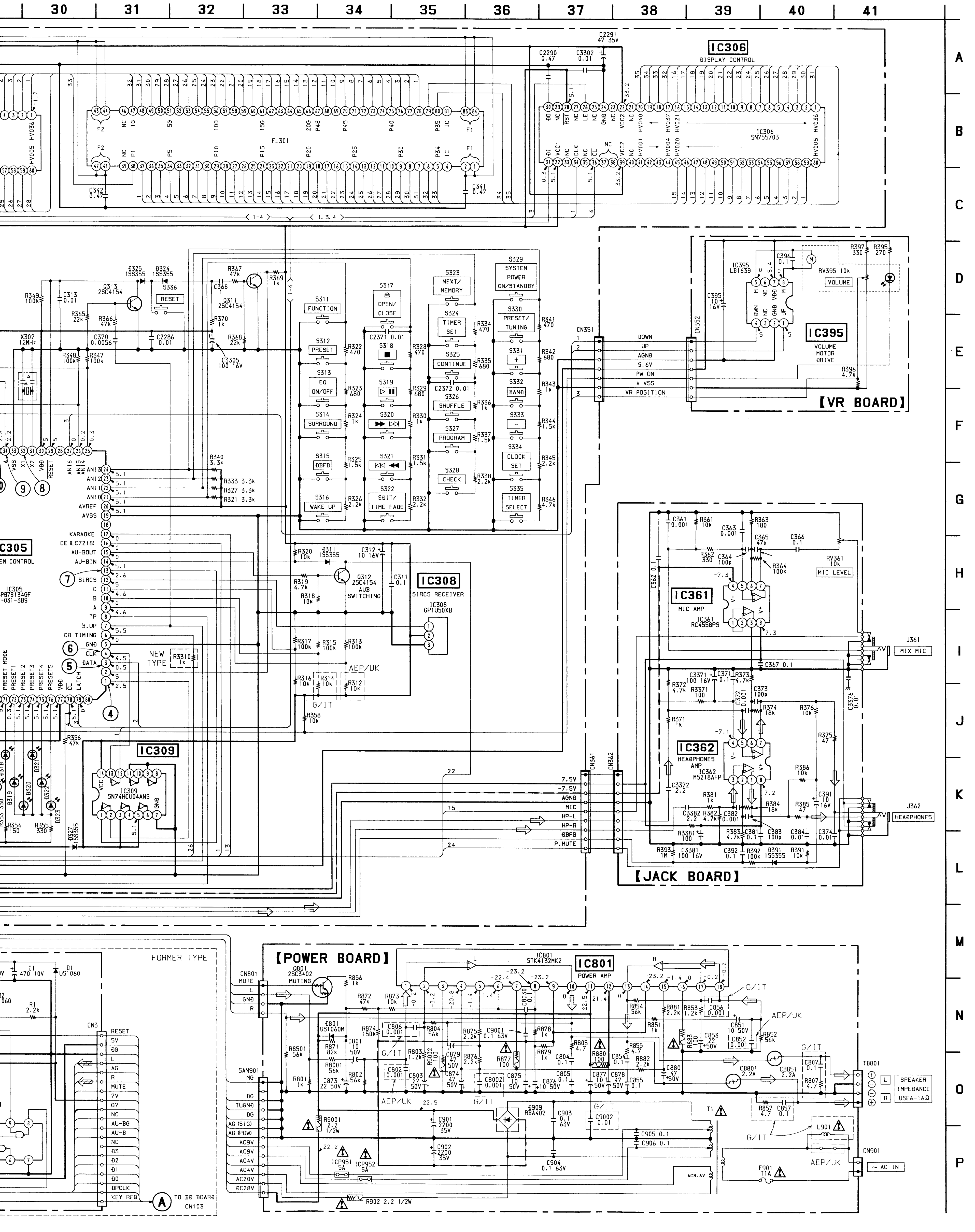
⚠ or dotted
y.
ed.

- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  < > : LW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ⇨ : CD

NEW TYPE : AEP, G, IT, UK
FORMER TYPE : AEP, UK
G : Germany
IT : Italian

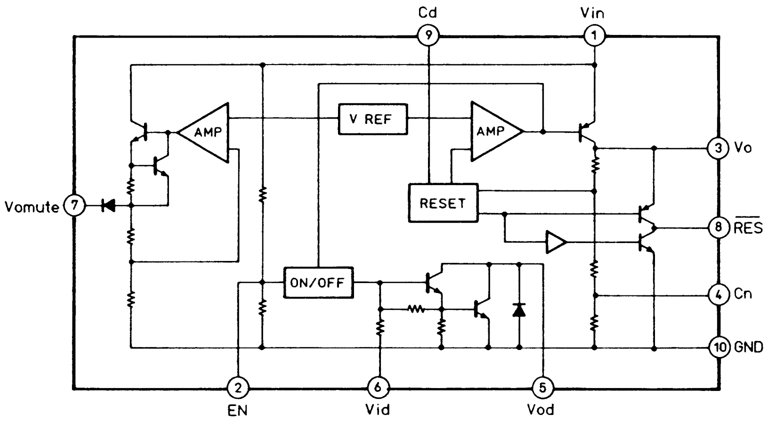


13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
PIN JACK BOARD
IC101 AF AMP
IC101 RC4558M
AEP/UK:100P
G/IT:220P
G/IT
MAIN BOARD (1/2)
IC201 FUNCTION SIGNAL SELECT
IC201 CD4052BCM
IC202 FUNCTION SIGNAL SELECT
IC202 CD4052BCM
IC203 AF AMP
IC203 RC4558PS
IC204 SURROUND SWITCHING
IC204 CD4066BCM
IC205 GEQ 7BAND, ELECTRICAL VOLUME
IC205 CXA1492Q
IC207 REFERENCE VOLTAGE
IC1 RESET
IC1 LA5601
NEW TYPE
FORMER TYPE
PANEL BOARD
IC307 DISPLAY CONTROL
IC302 SWITCHING
IC302 CD4052BCM
IC303 TIMER
IC303 μPD4990AG
IC304 MEMORY
IC304 X24C01P
Q314 2SC4398 SWITCHING
CN202
CN302
CN201
CN301
CN203
CN204
CN205
A
TO BD BOARD CN103
NEW TYPE
CD RST BOARD
IC1 SWITCHING, RESET
IC1 LA5601
Q204 2SC4154 MUTING
Q206 2SC4154 AF AMP
Q203 2SC4154 MUTING
Q205 2SC4154 AF AMP
Q287 2SC4398 SWITCHING
Q286 2SA1678 SWITCHING
Q4 2SC4396 MUTING
Q3 2SC4396 MUTING
Q283 2SD2012 REG
Q281 2SD2012 REG
Q290 2SD1622 REG
Q289 2SC4154 SWITCHING
Q2 2SC4154
Q1 2SA1602P


30
31
32
33
34
35
36
37
38
39
40
41
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
IC306
DISPLAY CONTROL
IC306 SN75S703
FL301
C2290 0.47
C3302 0.01
C2291 47 35V
C342 0.47
C341 0.47
IC305
SYSTEM CONTROL
X302 12MHz
S311 FUNCTION
S312 PRESET
S313 EQ ON/OFF
S314 SURROUND
S315 DBFB
S316 WAKE UP
S317 OPEN/CLOSE
S318 ■
S319 ▷ II
S320 ▶▶ ▷▷I
S321 I◁◁ ◀◀
S322 EDIT/TIME FADE
S323 NEXT/MEMORY
S324 TIMER SET
S325 CONTINUE
S326 SHUFFLE
S327 PROGRAM
S328 CHECK
S329 SYSTEM POWER ON/STANDBY
S330 PRESET/TUNING
S331 +
S332 BAND
S333 −
S334 CLOCK SET
S335 TIMER SELECT
S336 RESET
IC308
SIRCS RECEIVER
IC308 GP1U50XB
Q312 2SC4154 AUB SWITCHING
IC309
IC309 SN74HCU04ANS
NEW TYPE
R3310 1k
AEP/UK
G/IT
CN351
CN352
DOWN
UP
AGND
5.6V
PW ON
A VSS
VR POSITION
IC395
IC395 LB1639
VOLUME MOTOR DRIVE
RV395 10k
VOLUME
【VR BOARD】
IC361
MIC AMP
IC361 RC4558PS
RV361 10k
MIC LEVEL
J361
MIX MIC
IC362
HEADPHONES AMP
IC362 M5218AFP
J362
HEADPHONES
CN361
CN362
7.5V
-7.5V
AGND
MIC
HP-L
HP-R
DBFB
P.MUTE
【JACK BOARD】
【POWER BOARD】
IC801
IC801 STK4132MK2
POWER AMP
Q801 2SC3402 MUTING
CN801
MUTE
L
GND
R
SAN901
TB801
SPEAKER IMPEDANCE USE6-16Ω
CN901
~ AC IN
T1
F901 T1A
L901
R9001 2.2 1/2W
R902 2.2 1/2W
ICP951 5A
ICP952 5A
C901 2200 35V
C902 2200 35V
D909 RBA402
FORMER TYPE
CN3
RESET
KEY REQ
TO BD BOARD CN103
A

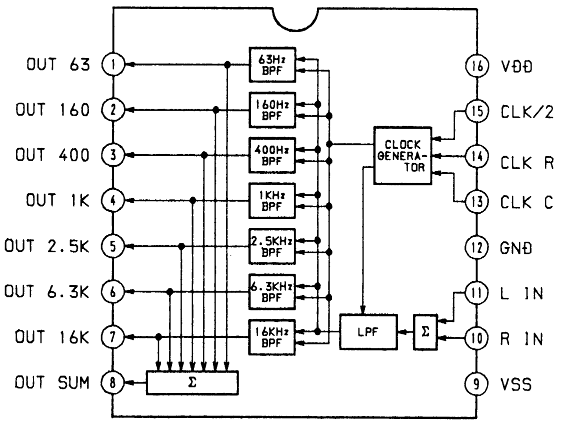
• IC Block Diagrams

### IC1 LA5601



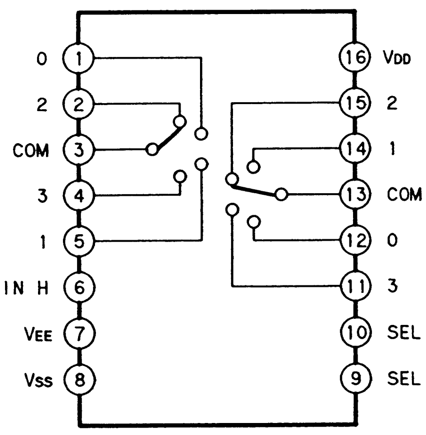
Cd
Vin
9
1
AMP
V REF
AMP
3 Vo
Vomute 7
RESET
8 RES
ON/OFF
4 Cn
10 GND
2
6
5
EN
Vid
Vod

### IC301 XR1091DCP



OUT 63
OUT 160
OUT 400
OUT 1K
OUT 2.5K
OUT 6.3K
OUT 16K
OUT SUM
63Hz BPF
160Hz BPF
400Hz BPF
1KHz BPF
2.5KHz BPF
6.3KHz BPF
16KHz BPF
Σ
CLOCK GENERA-TOR
LPF
Σ
VDD
CLK/2
CLK R
CLK C
GND
L IN
R IN
VSS

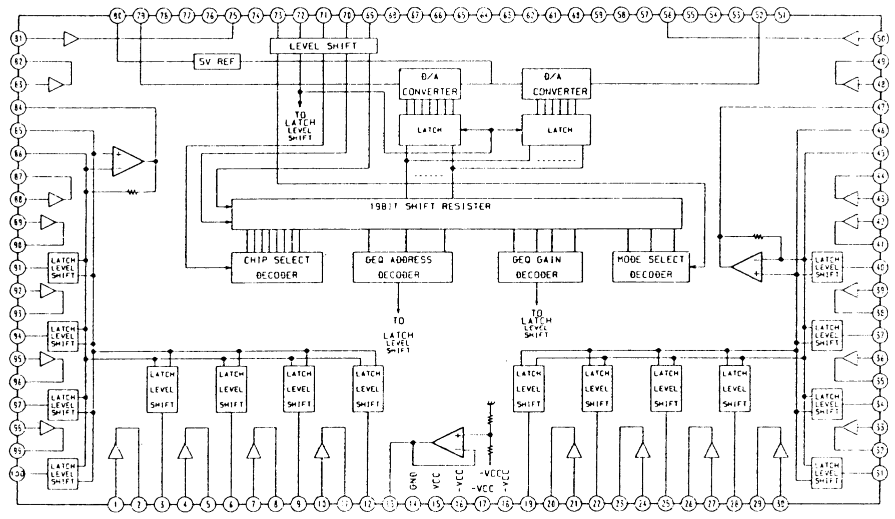
### IC302 CD4025BCM



0
2
COM
3
1
IN H
VEE
Vss
VDD
2
1
COM
0
3
SEL.A
SEL.B

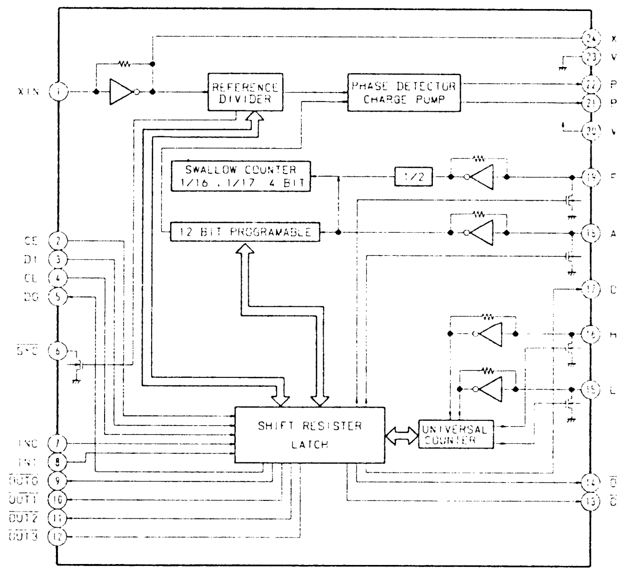
### IC

### IC205 CXA1492Q



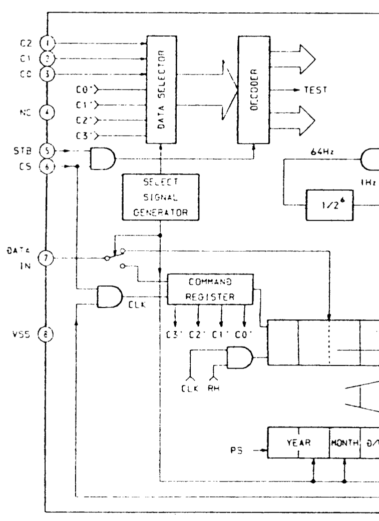
5V REF
LEVEL SHIFT
D/A CONVERTER
D/A CONVERTER
LATCH
LATCH
TO LATCH LEVEL SHIFT
19BIT SHIFT RESISTER
CHIP SELECT DECODER
GEQ ADDRESS DECODER
GEQ GAIN DECODER
MODE SELECT DECODER
TO LATCH LEVEL SHIFT
LATCH LEVEL SHIFT
GND
VCC
-VCC
-VCC

### IC21 LC7218M



XIN
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 4 BIT
1/2
12 BIT PROGRAMABLE
SHIFT RESISTER LATCH
UNIVERSAL COUNTER
CE
DI
CL
DO
SYC
INC
IN1
OUT0
OUT1
OUT2
OUT3
XOUT
VSS
PD2
PD1
VDD
FM IN
AM IN
OUT6
HCTR
LCTR
OUT5
OUT4

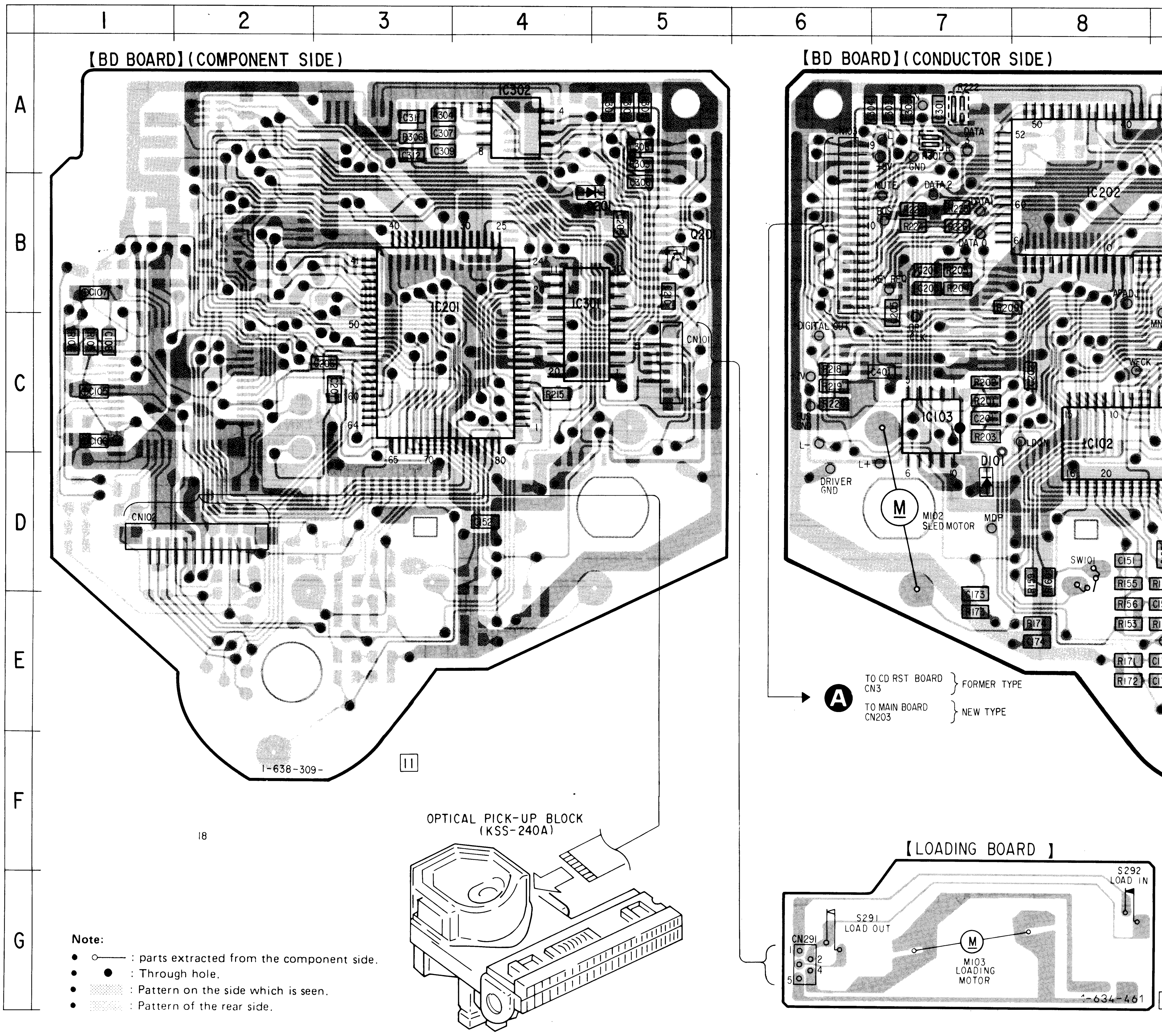
### IC303 μPD4990AG



C2
C1
C0
XC
STB
CS
DATA IN
VSS
DATA SELECTOR
DECODER
TEST
SELECT SIGNAL GENERATOR
1/2
COMMAND REGISTER
CLK
YEAR
MONTH

## 4-7. PRINTED WIRING BOARDS —— CD Section ——

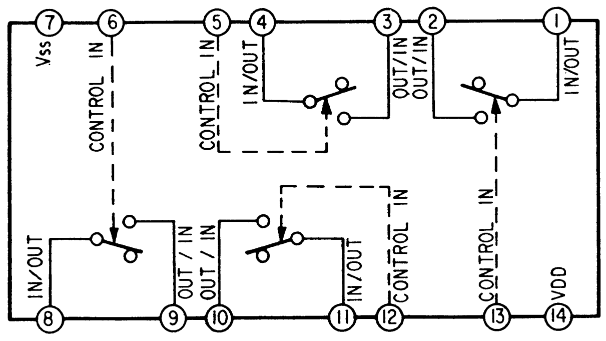
| Ref. No. | Location |
|---|---|
| D101 | J-7 |
| D201 | H-5 |
| IC101 | C-10 |
| IC102 | C-8 |
| IC103 | C-7 |
| IC201 | C-3 |
| IC202 | B-8 |
| IC301 | C-5 |
| IC302 | A-4 |
| Q101 | B-10 |
| Q201 | B-5 |



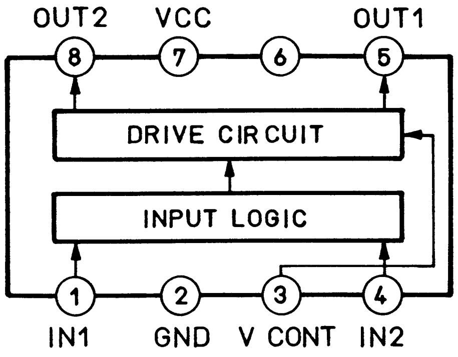
1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
【BD BOARD】(COMPONENT SIDE)
【BD BOARD】(CONDUCTOR SIDE)
IC302
IC201
IC301
IC202
IC103
IC102
CN101
CN102
Q201
D201
D101
1-638-309-
11
18
M
M102 SLED MOTOR
DRIVER GND
DIGITAL OUT
SW101
TO CD RST BOARD CN3
FORMER TYPE
TO MAIN BOARD CN203
NEW TYPE
A
OPTICAL PICK-UP BLOCK (KSS-240A)
【LOADING BOARD】
S291 LOAD OUT
S292 LOAD IN
CN291
M103 LOADING MOTOR
1-634-461

Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

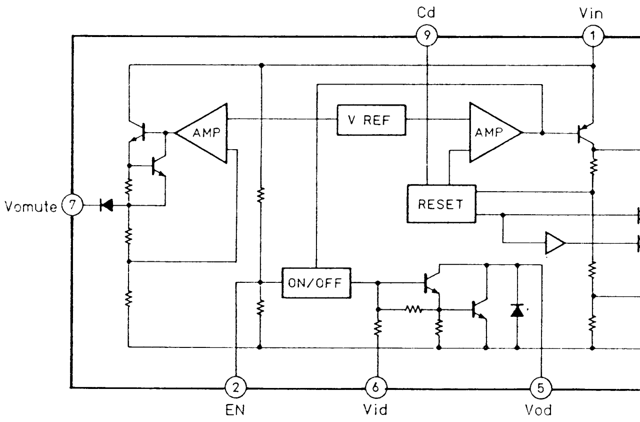
## IC204 CD4066BCM


Vss
CONTROL IN
CONTROL IN
IN/OUT
OUT/IN
OUT/IN
IN/OUT
IN/OUT
OUT / IN
OUT / IN
IN/OUT
CONTROL IN
CONTROL IN
VDD
7
6
5
4
3
2
1
8
9
10
11
12
13
14

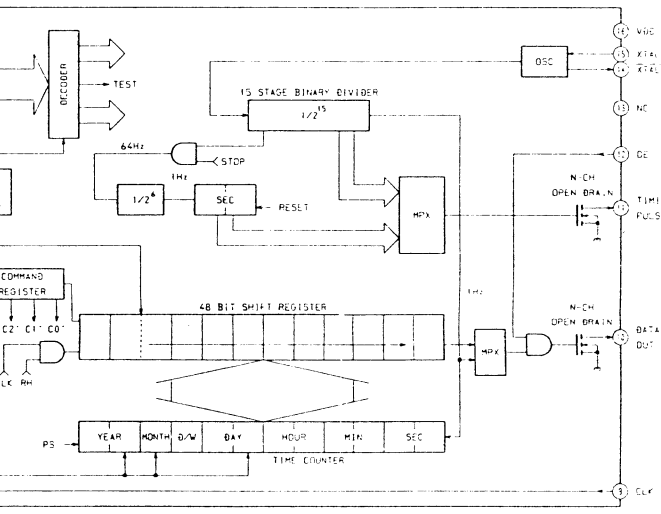
## IC395 LB1639


OUT2
VCC
OUT1
8
7
6
5
DRIVE CIRCUIT
INPUT LOGIC
1
2
3
4
IN1
GND
V CONT
IN2

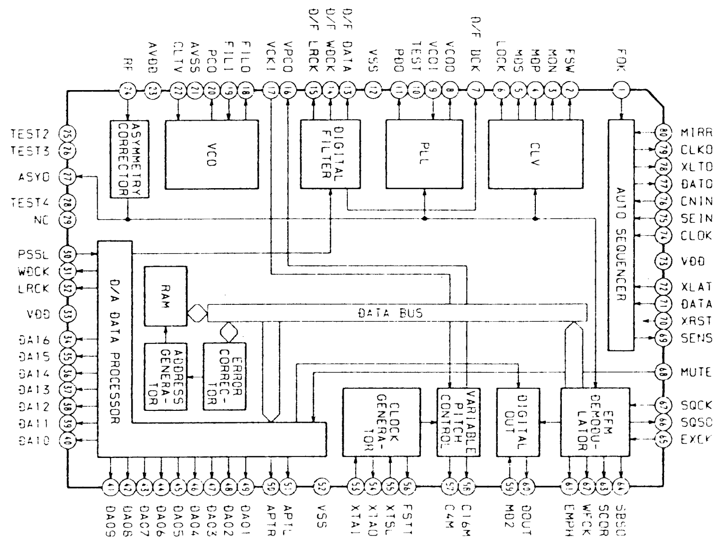
## IC1 LA5601


Cd
Vin
9
1
AMP
V REF
AMP
Vomute
7
RESET
ON/OFF
2
6
5
EN
Vid
Vod

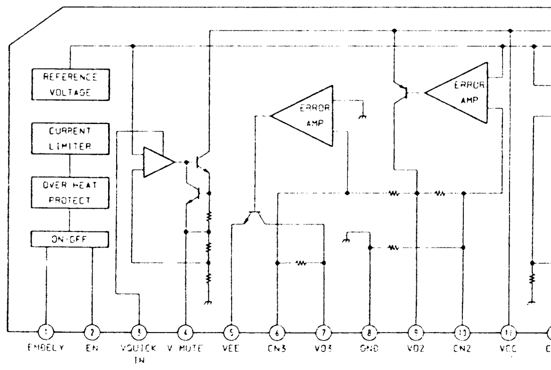
## D4990AG


DECODER
TEST
OSC
15 STAGE BINARY DIVIDER
64Hz
STOP
1Hz
SEC
RESET
MPX
N-CH OPEN DRAIN
TIMING PULSE
COMMAND REGISTER
48 BIT SHIFT REGISTER
MPX
N-CH OPEN DRAIN
DATA OUT
YEAR
MONTH
D/W
DAY
HOUR
MIN
SEC
TIME COUNTER
VDD
XTAL
XTAL
NC
OE
CLK

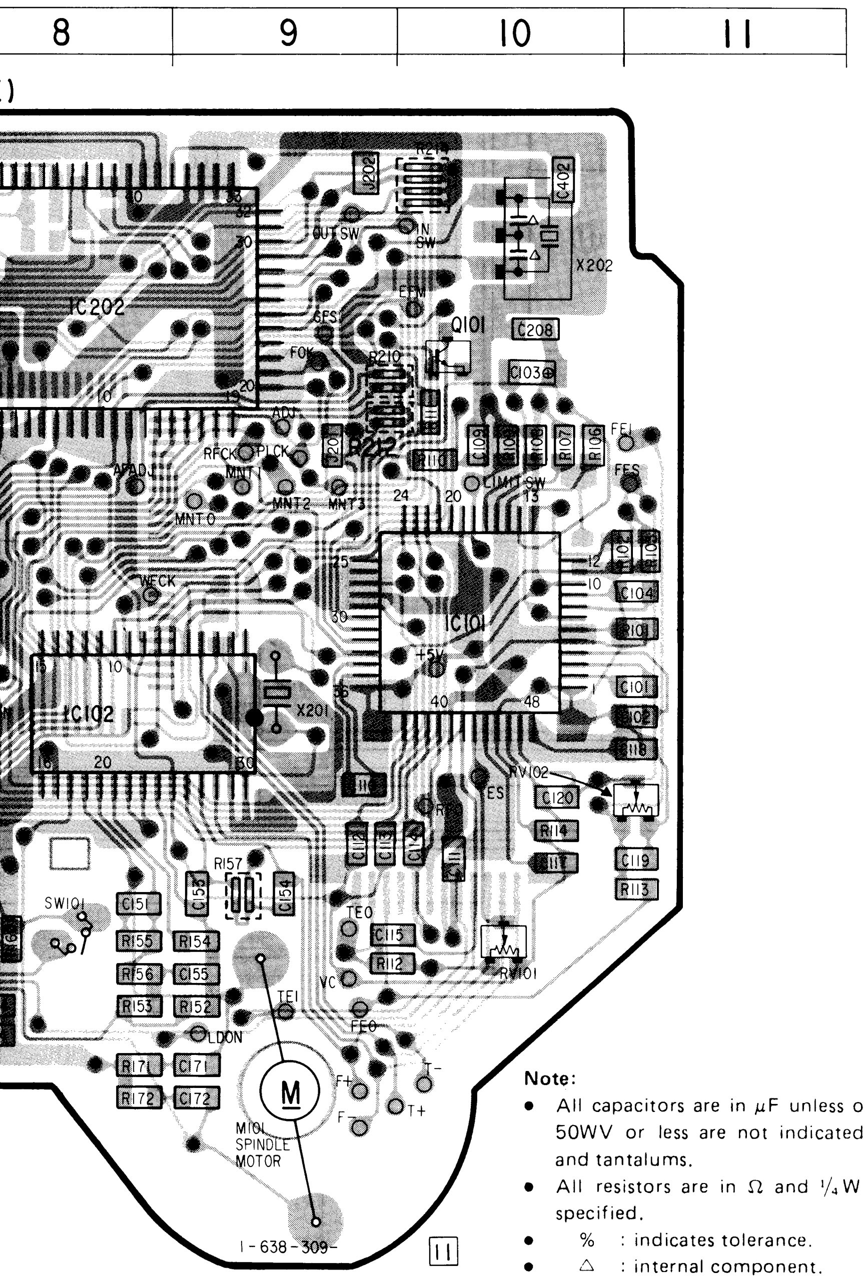
## IC201 CXD2505Q


ASYMMETRY CORRECTOR
VCO
DIGITAL FILTER
PLL
CLV
AUTO SEQUENCER
D/A DATA PROCESSOR
RAM
ADDRESS GENERATOR
ERROR CORRECTOR
DATA BUS
CLOCK GENERATOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODULATOR
TEST2
TEST3
ASYO
TEST4
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10
MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK

## IC207 LA5603


REFERENCE VOLTAGE
CURRENT LIMITER
OVER HEAT PROTECT
ON-OFF
ERROR AMP
ERROR AMP
EN
VQUICK IN
V MUTE
VEE
CN3
VO1
GND
VO2
CN2
VCC

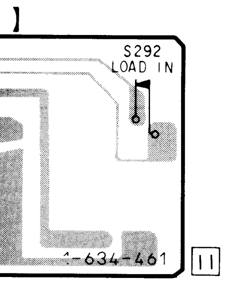
## 4-8. SCHEMATIC DIAGRAM — CD Section —

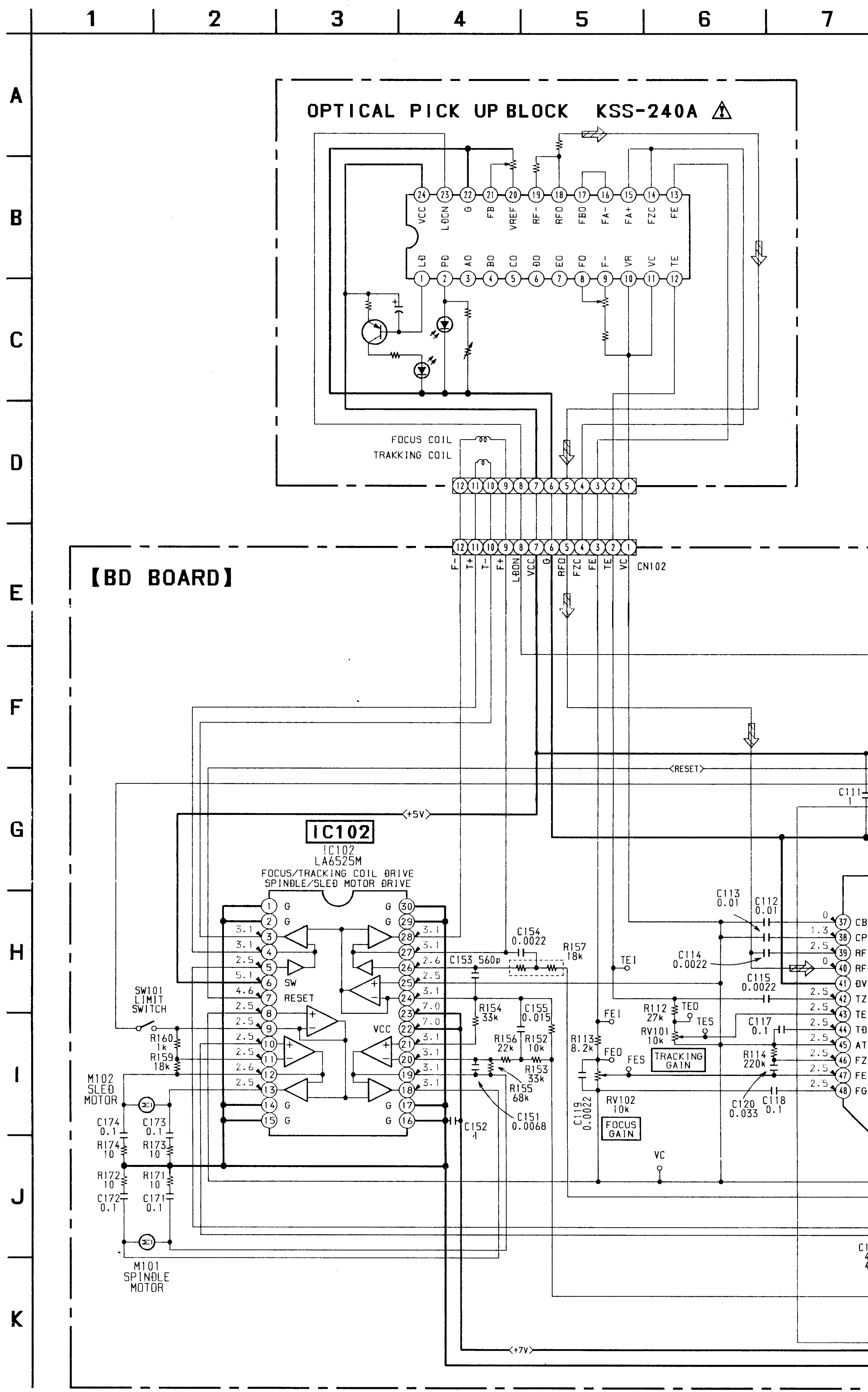

8
9
10
11
IC202
IC101
IC102
X201
X202
Q101
RV101
RV102
SW101
M101 SPINDLE MOTOR
M
1-638-309-
11

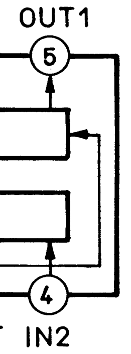
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.

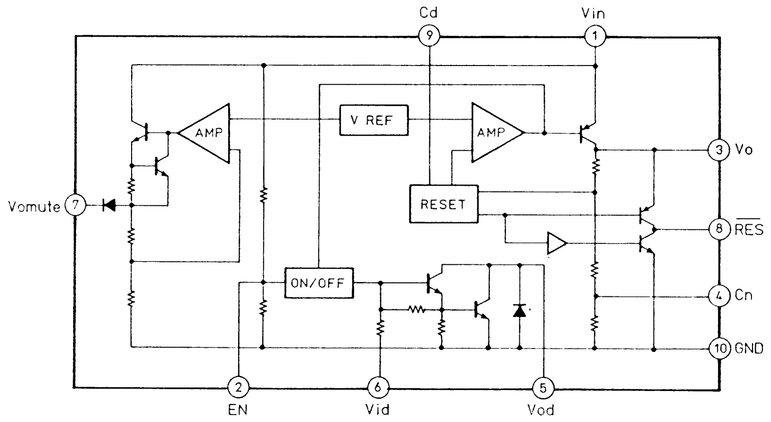
**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.


S292
LOAD IN
1-634-461
11

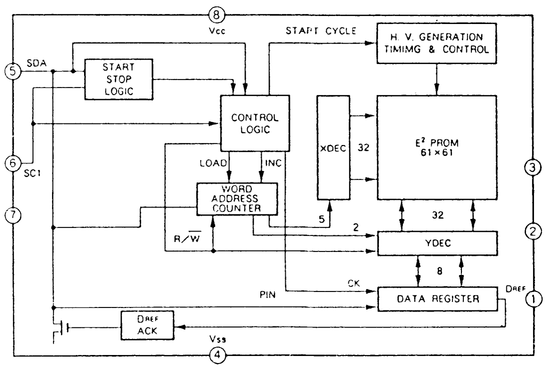

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
OPTICAL PICK UP BLOCK KSS-240A ⚠
VCC
LDON
G
FB
VREF
RF-
RFO
FBO
FA-
FA+
FZC
FE
LD
PD
AO
BO
CO
DO
EO
FO
F-
VR
VC
TE
FOCUS COIL
TRAKKING COIL
[BD BOARD]
CN102
F-
T+
T-
F+
LDON
VCC
G
RFO
FZC
FE
TE
VC
<RESET>
<+5V>
IC102
IC102 LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
SW
RESET
VCC
SW101 LIMIT SWITCH
R160 1k
R159 18k
M102 SLED MOTOR
C174 0.1
C173 0.1
R174 10
R173 10
R172 10
R171 10
C172 0.1
C171 0.1
M101 SPINDLE MOTOR
C154 0.0022
C153 560p
R157 18k
R154 33k
C155 0.015
R156 22k
R152 10k
R153 33k
R155 68k
C151 0.0068
C152 1
C119 0.0022
R113 8.2k
FEI
FEO
FES
TEI
R112 27k
RV101 10k
TEO
TES
TRACKING GAIN
RV102 10k
FOCUS GAIN
VC
C114 0.0022
C113 0.01
C112 0.01
C115 0.0022
C117 0.1
R114 220k
C120 0.033
C118 0.1
C111
<+7V>
18



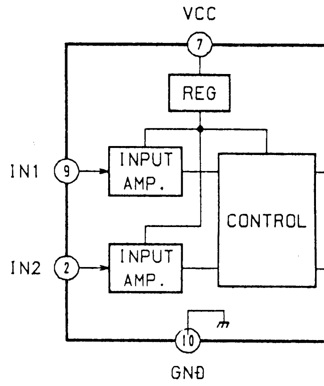
## IC1 LA5601

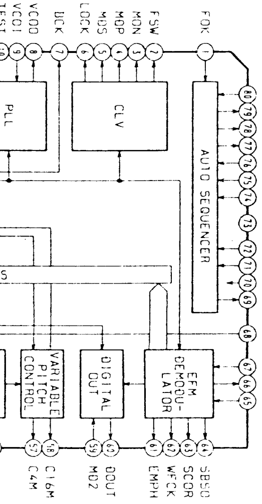

Cd
Vin
AMP
V REF
AMP
RESET
Vomute
ON/OFF
Vo
RES
Cn
GND
EN
Vid
Vod

## IC304 X24C01P

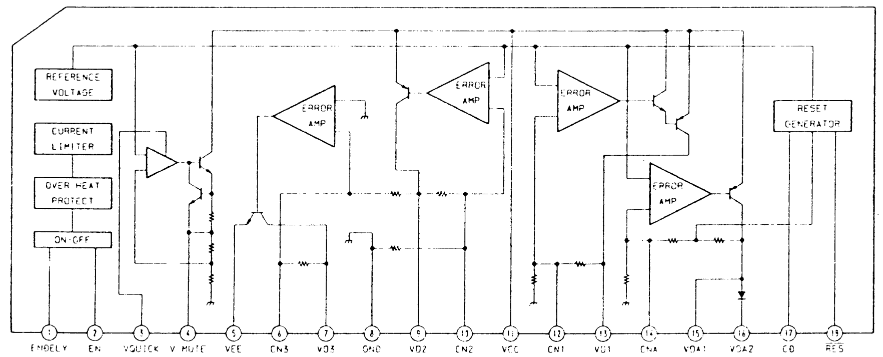

Vcc
START CYCLE
H. V. GENERATION TIMIMG & CONTROL
SDA
START STOP LOGIC
CONTROL LOGIC
XDEC
E² PROM 61×61
SCl
LOAD
INC
WORD ADDRESS COUNTER
R/W
YDEC
PIN
CK
DATA REGISTER
DOUT ACK
Vss

## IC103 M54641FP

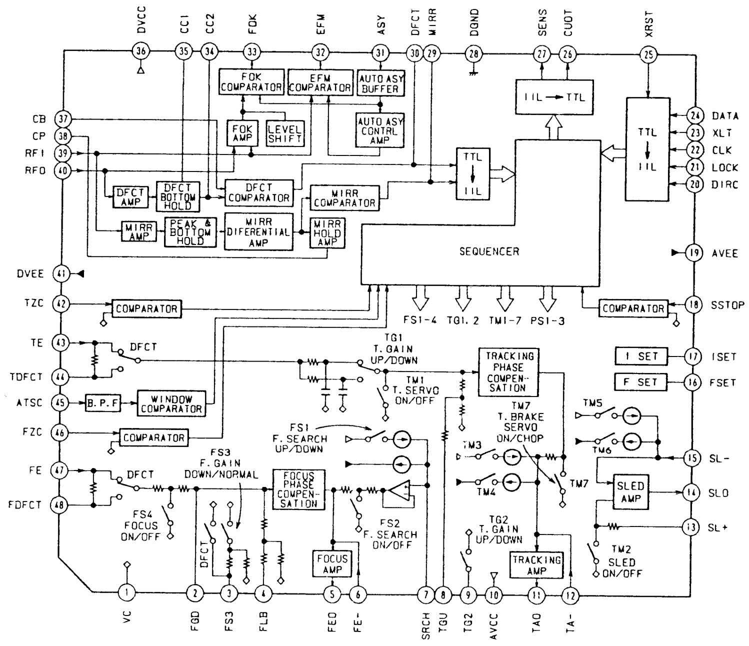

VCC
REG
IN1
INPUT AMP.
CONTROL
IN2
INPUT AMP.
GND


PLL
CLV
AUTO SEQUENCER
MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODU-LATOR

## IC207 LA5603

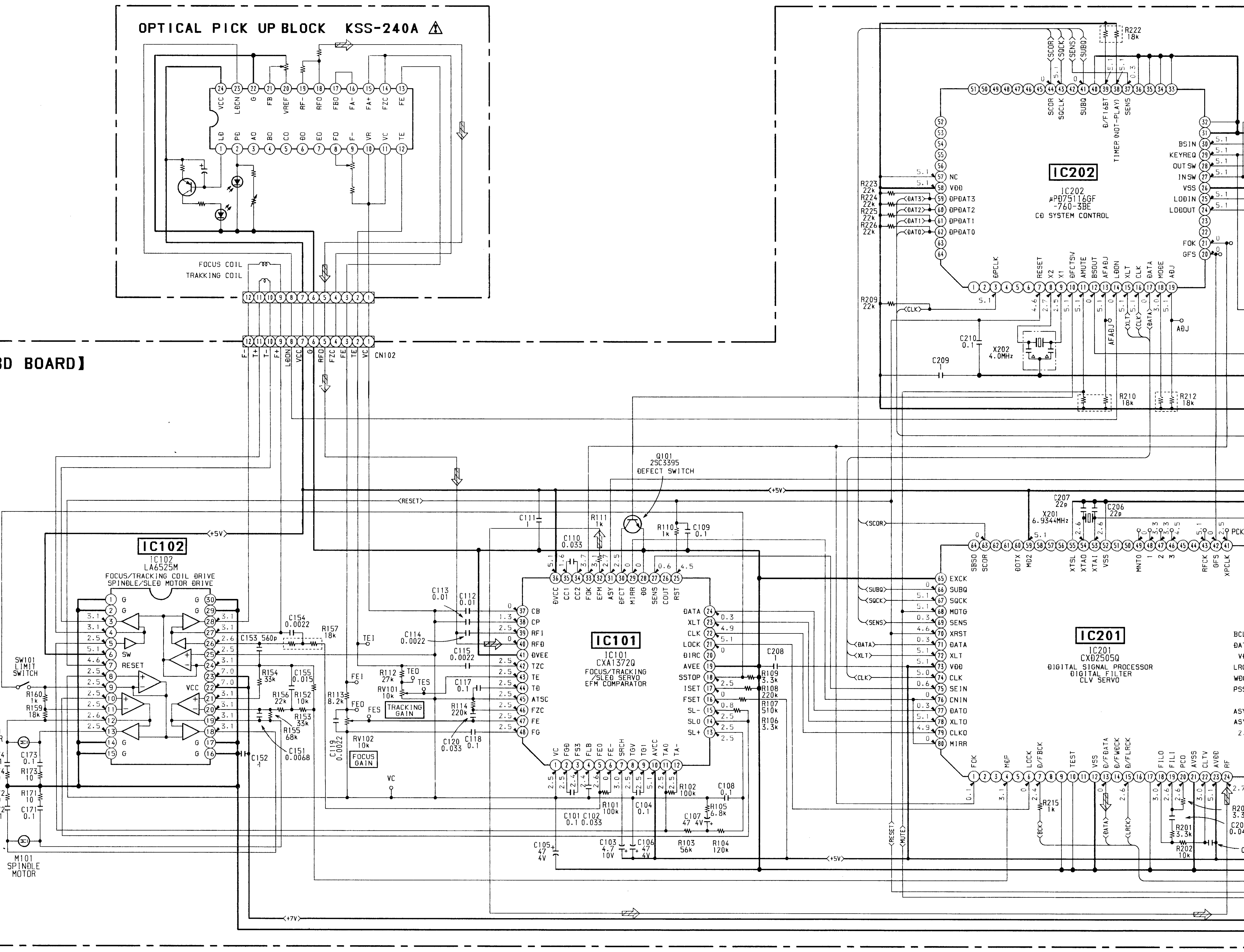

REFERENCE VOLTAGE
CURRENT LIMITER
OVER HEAT PROTECT
ON OFF
ERROR AMP
ERROR AMP
ERROR AMP
ERROR AMP
RESET GENERATOR

## IC101 CXA1372Q

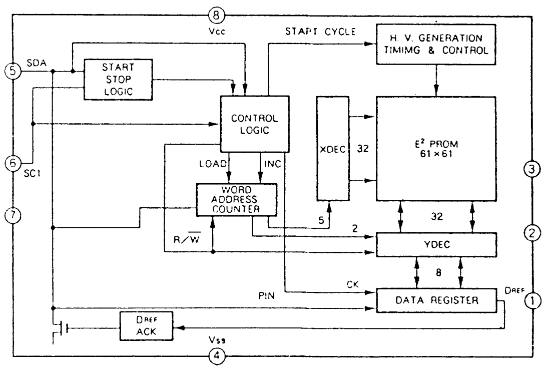

FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTRL AMP
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
COMPARATOR
WINDOW COMPARATOR
B.P.F
FOCUS PHASE COMPEN-SATION
FOCUS AMP
TRACKING PHASE COMPEN-SATION
TRACKING AMP
SLED AMP
I SET
F SET

## EMATIC DIAGRAM — CD Section —

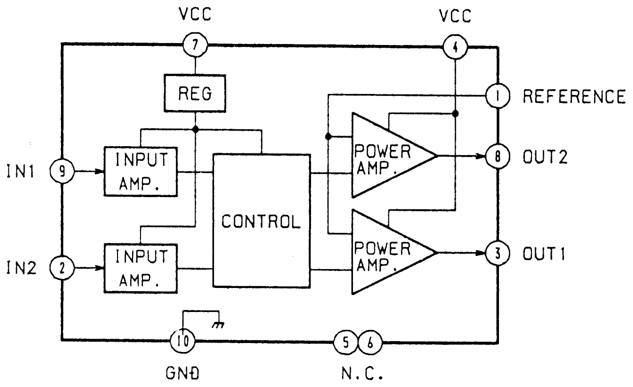
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

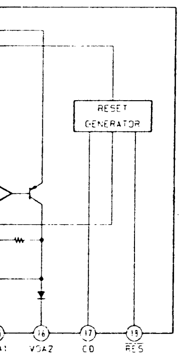

OPTICAL PICK UP BLOCK KSS-240A
FOCUS COIL
TRAKKING COIL
BD BOARD】
CN102
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
SW101 LIMIT SWITCH
M101 SPINDLE MOTOR
IC101
CXA1372Q
FOCUS/TRACKING /SLED SERVO EFM COMPARATOR
Q101 2SC3395 DEFECT SWITCH
TRACKING GAIN
FOCUS GAIN
IC202
μPD75116GF -760-3BE
CD SYSTEM CONTROL
X202 4.0MHz
IC201
CXD2505Q
DIGITAL SIGNAL PROCESSOR DIGITAL FILTER CLV SERVO
X201 6.9344MHz

## IC304 X24C01P

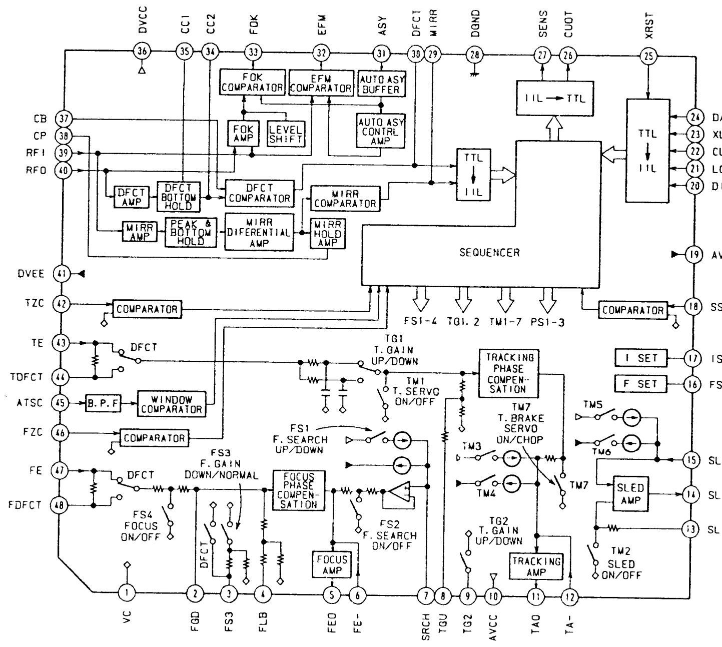

Vcc
START CYCLE
H. V. GENERATION TIMIMG & CONTROL
SDA
START STOP LOGIC
CONTROL LOGIC
XDEC
E² PROM 61×61
SCl
LOAD
INC
WORD ADDRESS COUNTER
R/W
YDEC
CK
PIN
DATA REGISTER
Dᴀᴇғ ACK
Vss
8 5 6 7 3 2 1 4 32

## IC103 M54641FP

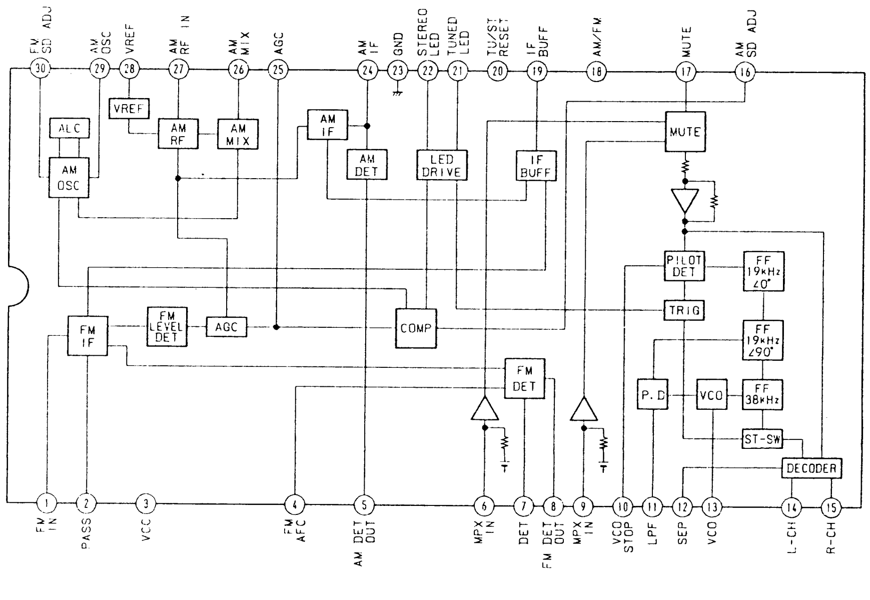

VCC
VCC
REG
REFERENCE
IN1
INPUT AMP.
CONTROL
POWER AMP.
OUT2
IN2
INPUT AMP.
POWER AMP.
OUT1
GND
N.C.

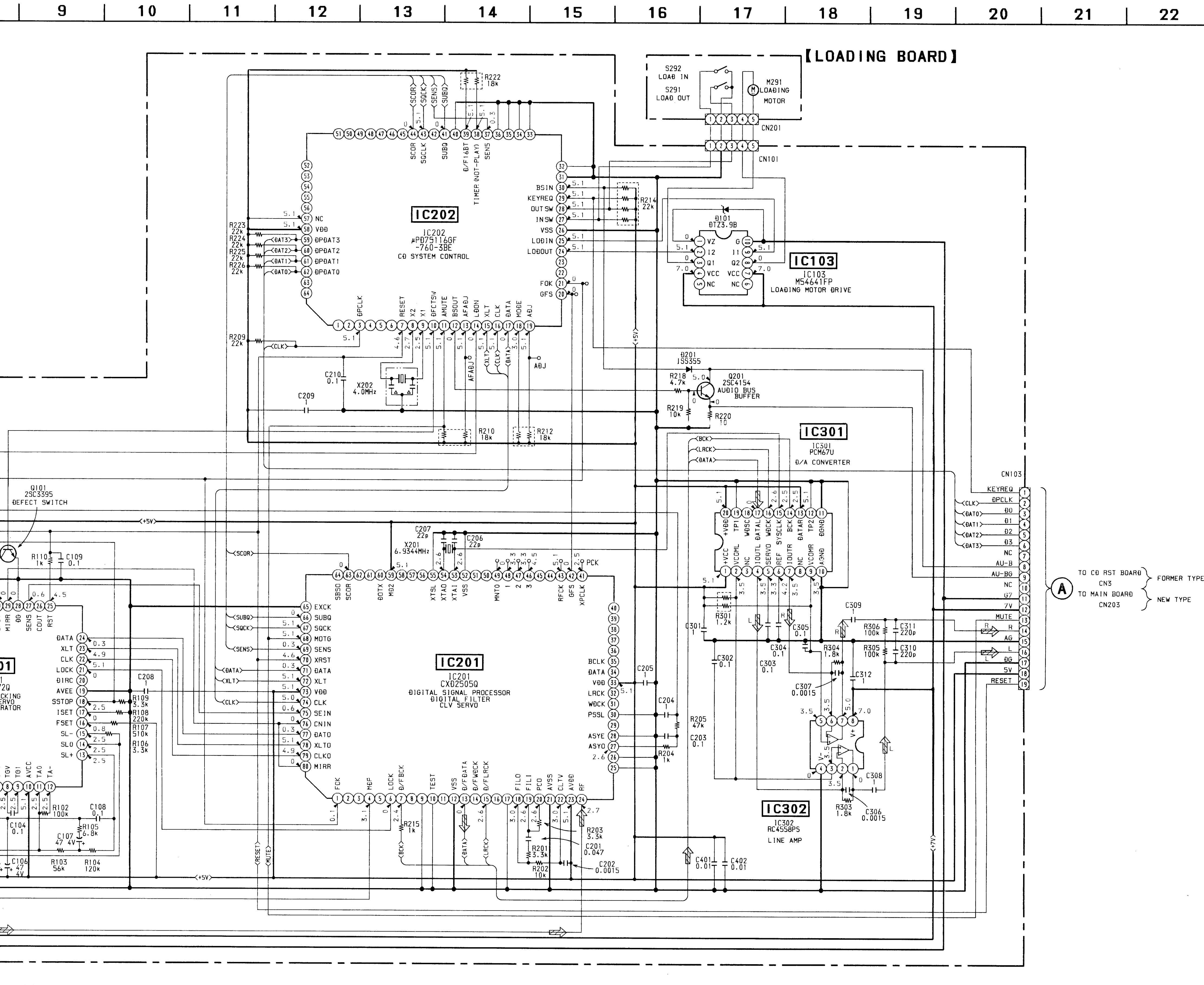

RESET GENERATOR
VGA2
CO
RES

## IC101 CXA1372Q


DVCC CC1 CC2 FOK EFM ASY DFCT MIRR DGND SENS CLOT XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTROL AMP
IIL → TTL
TTL IIL
CB CP RFI RFO
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFFERENTIAL AMP
MIRR HOLD AMP
DATA XLT CLK LOCK DIRC
SEQUENCER
AVEE
DVEE
TZC
COMPARATOR
FS1-4 TG1.2 TM1-7 PS1-3
COMPARATOR
SSTOP
TE
TDFCT
ATSC
B.P.F.
WINDOW COMPARATOR
DFCT
TG1 T. GAIN UP/DOWN
TM1 T. SERVO ON/OFF
TRACKING PHASE COMPEN-SATION
I SET
F SET
ISET
FSET
FZC
COMPARATOR
FS1 F. SEARCH UP/DOWN
TM7 T. BRAKE SERVO ON/CHOP
TM5
TM6
TM3
TM4
SL-
SLO
SL+
FE
FDFCT
FS3 F. GAIN DOWN/NORMAL
FOCUS PHASE COMPEN-SATION
FS2 F. SEARCH ON/OFF
FS4 FOCUS ON/OFF
SLED AMP
TG2 T. GAIN UP/DOWN
TM2 SLED ON/OFF
TRACKING AMP
FOCUS AMP
VC FGD FS3 FLB FEO FE- SRCH TGU TG2 AVCC TAO TA-

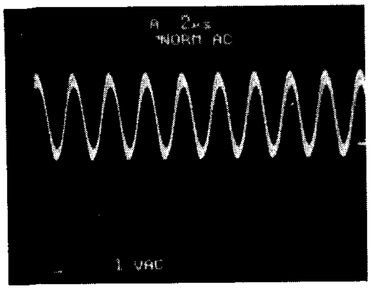
## IC51 LA1851NM


FM SD ADJ
AM OSC
VREF
AM RF IN
AM MIX
AGC
AM IF
GND
STEREO LED
TUNED LED
TU/ST RESET
IF BUFF
AM/FM
MUTE
AM SD ADJ
ALC
VREF
AM RF
AM MIX
AM IF
AM OSC
AM DET
LED DRIVE
IF BUFF
MUTE
PILOT DET
FF 19kHz ∠0°
TRIG
FM IF
FM LEVEL DET
AGC
COMP
FF 19kHz ∠90°
FM DET
P.D
VCO
FF 38kHz
ST-SW
DECODER
FM IN
PASS
VCC
FM AFC
AM DET OUT
MPX IN
DET
FM DET OUT
MPX IN
VCO STOP
LPF
SEP
VCO
L-CH
R-CH

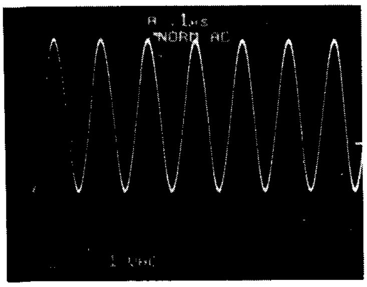

9
10
11
12
13
14
15
16
17
18
19
20
21
22
【LOADING BOARD】
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN201
CN101
R222 18k
IC202
IC202 μPD75116GF -760-3BE
CD SYSTEM CONTROL
SCOR SQCK SENS SUBQ
BSIN KEYREQ OUTSW INSW VSS LODIN LODOUT FOK GFS
R214 22k
NC VDD DPDAT3 DPDAT2 DPDAT1 DPDAT0
R223 22k
R224 22k
R225 22k
R226 22k
R209 22k
DPCLK RESET X2 X1 DFCTSW AMUTE BSOUT AFADJ LDON XLT CLK DATA MODE ADJ
C210 0.1
X202 4.0MHz
C209 1
R210 18k
R212 18k
D101 DTZ3.9B
IC103
IC103 M54641FP
LOADING MOTOR DRIVE
D201 1SS355
R218 4.7k
Q201 2SC4154 AUDIO BUS BUFFER
R219 10k
R220 10
IC301
IC301 PCM67U
D/A CONVERTER
BCK LRCK DATA
CN103
KEYREQ DPCLK D0 D1 D2 D3 NC AU-B AU-BG NC G7 7V MUTE R AG L DG 5V RESET
TO CD RST BOARD CN3 — FORMER TYPE
TO MAIN BOARD CN203 — NEW TYPE
A
Q101 2SC3395 DEFECT SWITCH
R110 1k
C109 0.1
C207 22p
X201 6.9344MHz
C206 22p
PCK
IC201
IC201 CXD2505Q
DIGITAL SIGNAL PROCESSOR
DIGITAL FILTER
CLV SERVO
EXCK SUBQ SQCK MDTG SENS XRST DATA XLT VDD CLK SEIN CNIN DATO XLTO CLKO MIRR
BCLK DATA VDD LRCK WDCK PSSL ASYE ASYO
FCK MDP LOCK DFBCK TEST VSS FILO FILI PCO AVSS CLTV AVDD RF
C205
C204
R205 47k
C203 0.1
R204 1k
R215 1k
R203 3.3k
C201 0.047
R201 3.3k
R202 10k
C202 0.0015
C401 0.01
C402 0.01
DATA XLT CLK LOCK DIRC AVEE SSTOP ISET FSET SL- SLO SL+
C208 1
R109 3.3k
R108 220k
R107 510k
R106 3.3k
R102 100k
C108 0.1
R105 6.8k
C107 47 4V
C104 0.1
C106 47 4V
R103 56k
R104 120k
C301 1
R301 1.2k
C302 0.1
C303 0.1
C304 0.1
C305 0.1
R304 1.8k
C307 0.0015
C309
C312 1
R306 100k
R305 100k
C311 220p
C310 220p
C308 1
R303 1.8k
C306 0.0015
IC302
IC302 RC4558PS
LINE AMP
+5V
RESET MUTE

## 4-9. WAVEFORMS

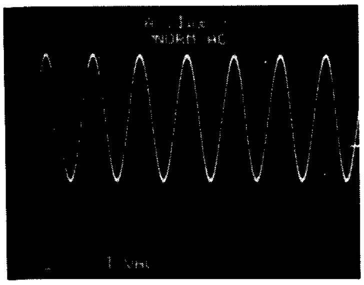
① IC51⑬pin



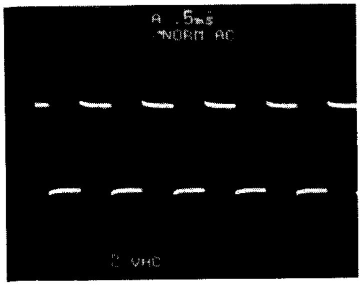
②IC21㉔ pin



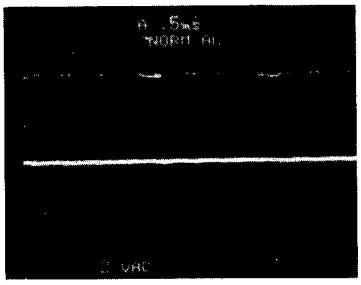
③IC21① pin



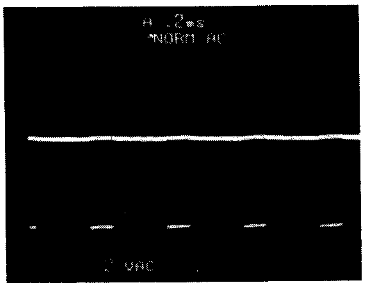
④IC305① pin



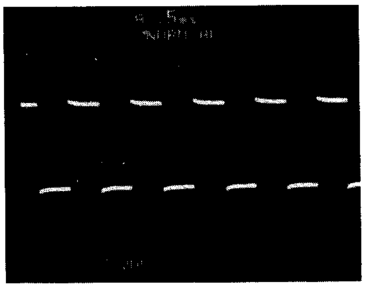
⑤IC305③ pin



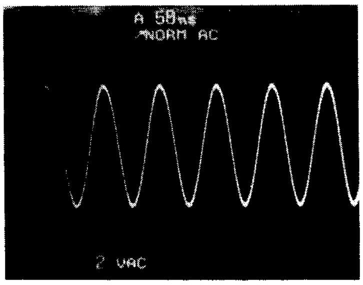
⑥IC305④ pin



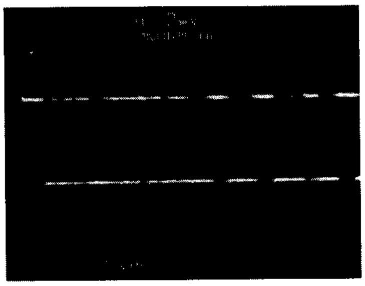
⑦IC305⑬ pin



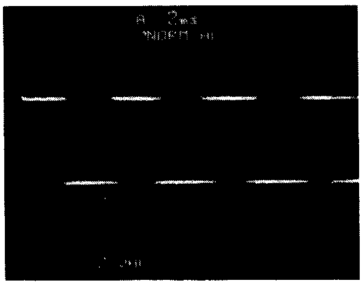
⑧IC305㉜ pin



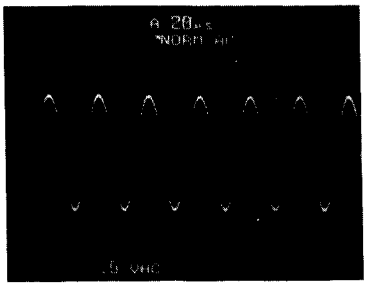
⑨IC305㉞ pin



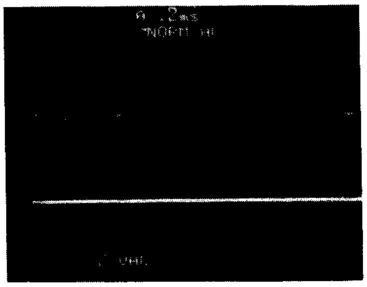
⑩IC305㉟ pin



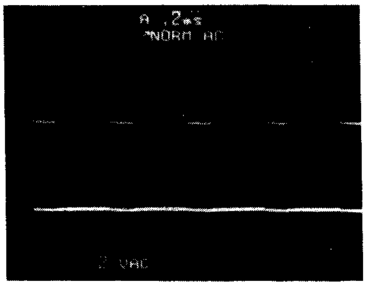
⑪IC303⑭ pin



⑫IC307㉚,㉛ pin



⑬IC307㉞ pin



# SECTION 5
# EXPLODED VIEWS

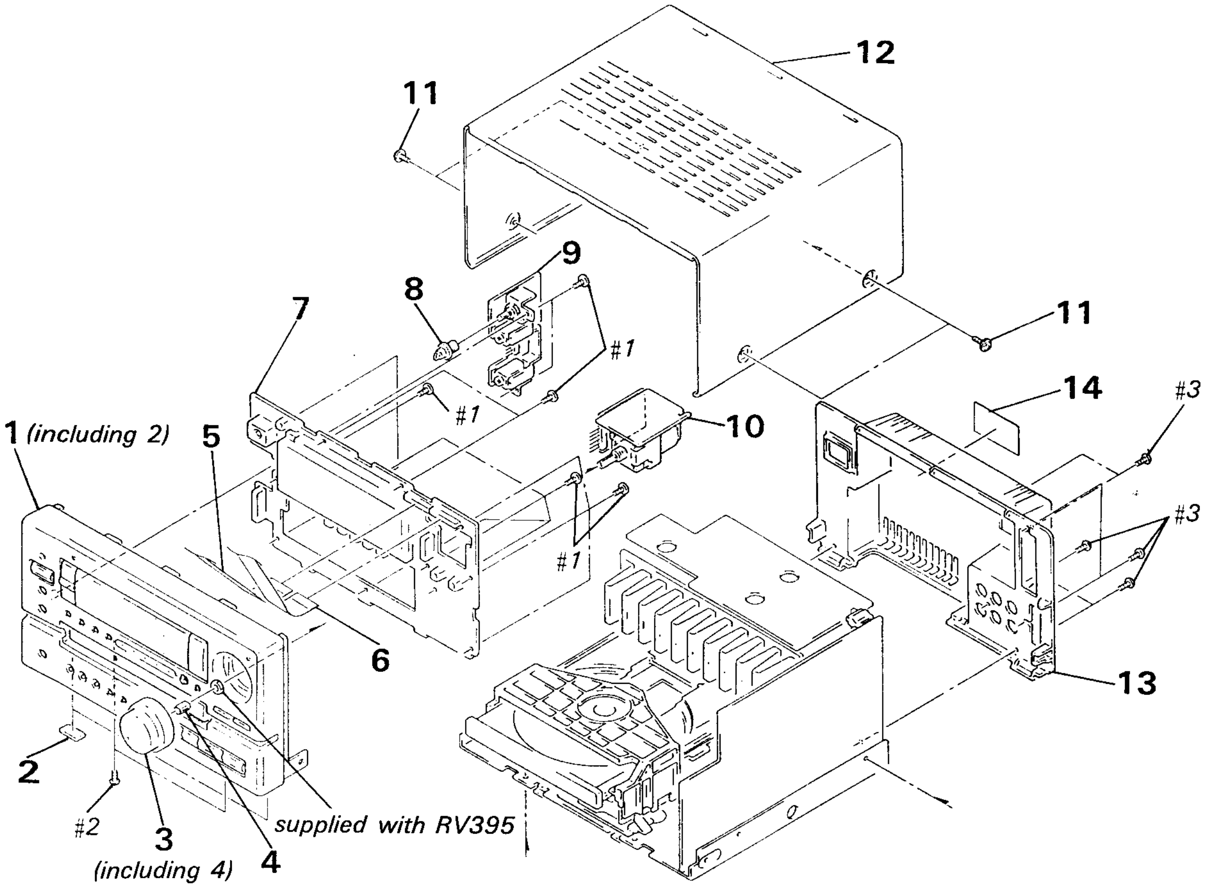
NOTE:
- −XX, −X mean standardized parts, so they may have some differences from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "∗" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE(WHITE)...(RED)
  ↑ ↑
  Part's Color Cabinet's Color
- Hardware (#mark) list is given in the last of this parts list.

NEW TYPE : AEP, G, IT, UK
FORMER TYPE : AEP, UK
G : Germany
IT : Italian

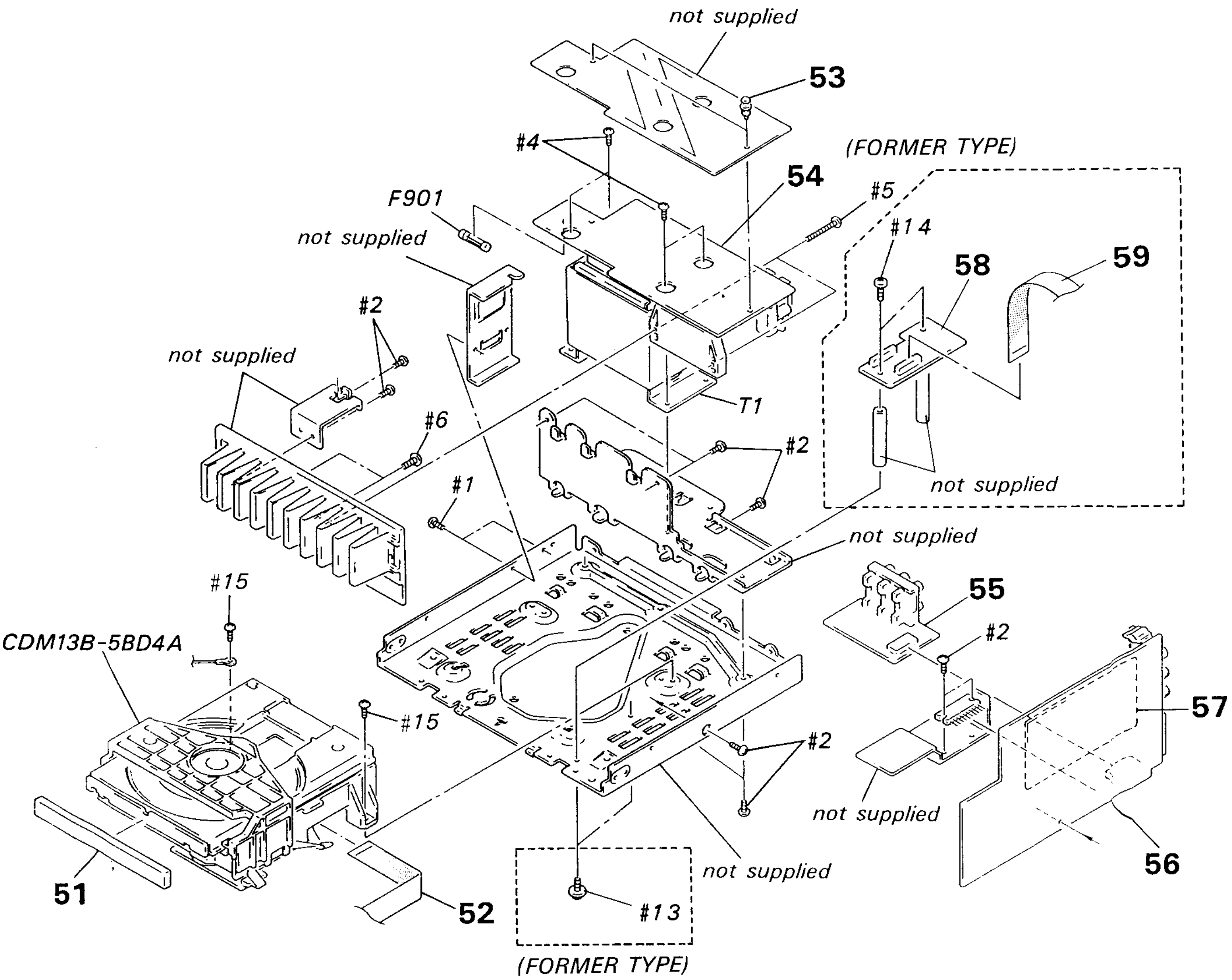
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

## 5-1. FRONT PANEL SECTION



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-4941-581-1 | PANEL ASSY, FRONT | |
| 2 | 4-930-336-01 | FOOT (FELT) | |
| 3 | X-4941-489-1 | KNOB (VOLUME) ASSY | |
| 4 | 3-703-466-00 | SPRING (6600) | |
| 5 | 1-590-907-11 | WIRE, FLAT TYPE (20 CORE) | |
| 6 | 1-590-908-11 | WIRE, FLAT TYPE (20 CORE) | |
| 7 | ∗ A-4341-658-A | PANEL BOARD, COMPLETE (AEP, UK) | |
| 7 | ∗ A-4341-707-A | PANEL BOARD, COMPLETE (IT) | |
| 7 | ∗ A-4341-664-A | PANEL BOARD, COMPLETE (G) | |
| 8 | 4-932-882-11 | KNOB (HP. VOL) | |
| 9 | ∗ 1-638-882-11 | JACK BOARD | |
| 10 | ∗ 1-638-884-11 | VR BOARD | |
| 11 | 3-704-366-01 | SCREW (CASE) (M3X8) | |
| 12 | ∗ 4-944-213-01 | CASE | |
| 13 | ∗ 4-944-211-21 | PANEL, BACK | |
| 14 | ∗ 4-941-548-01 | LABEL, CLASS 1 | |

## 5-2. CHASSIS SECTION

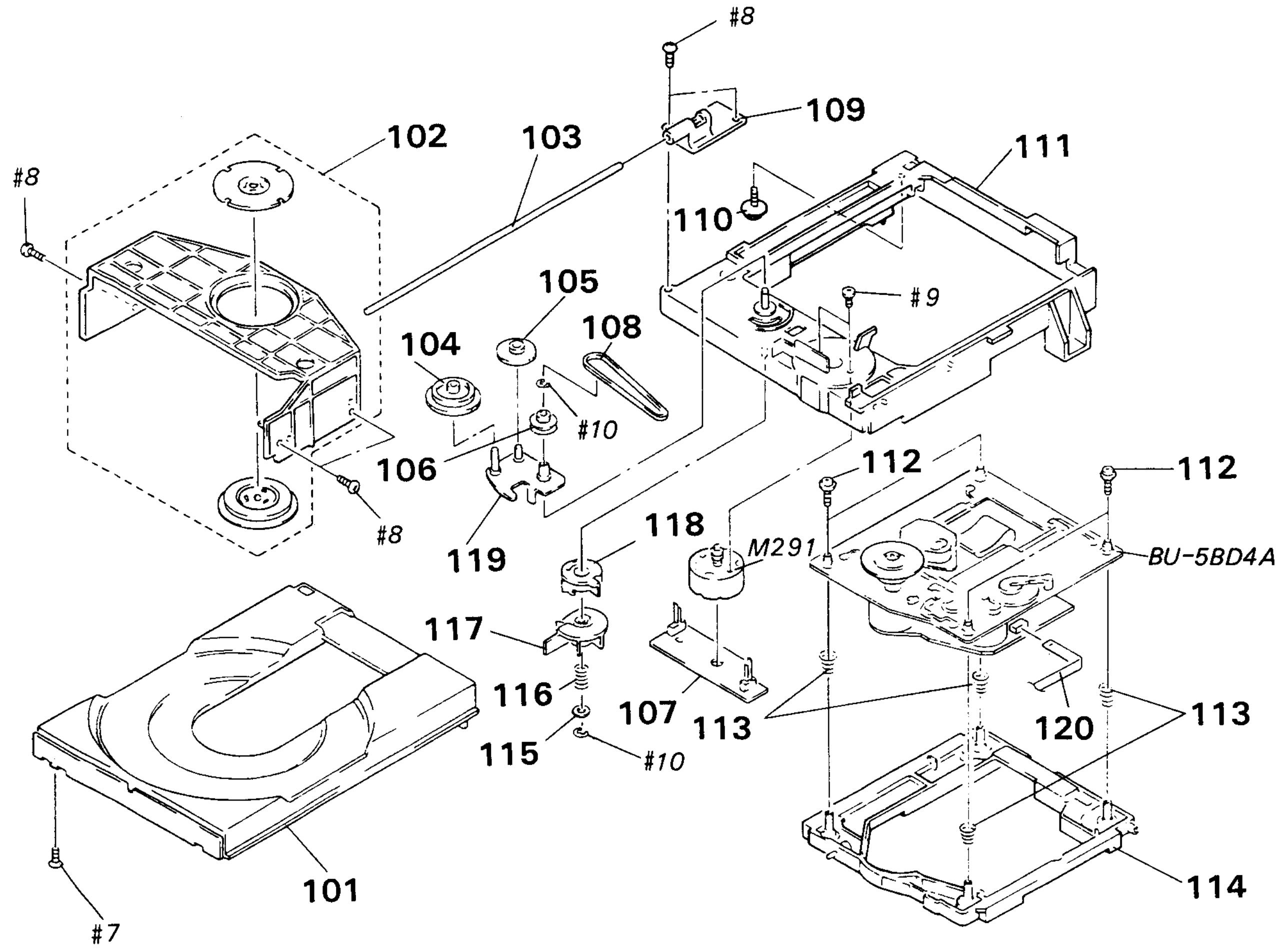

not supplied
53
#4
(FORMER TYPE)
54
F901
#5
not supplied
#14
58
59
#2
not supplied
#6
T1
#2
#1
not supplied
not supplied
#15
55
#2
CDM13B-5BD4A
57
#15
#2
not supplied
56
51
not supplied
52
#13
(FORMER TYPE)

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 4-944-199-01 | PANEL, LOADING | |
| 52 | 1-590-906-11 | WIRE, FLAT TYPE (19 CORE) | |
| 53 | 4-812-134-31 | RIVET NYLON, 3.5 | |
| 54 | * A-4341-652-A | POWER BOARD, COMPLETE (AEP,UK) | |
| 54 | * A-4341-653-A | POWER BOARD, COMPLETE (UK) | |
| 54 | * A-4341-661-A | POWER BOARD, COMPLETE (G) | |
| 55 | * 1-638-883-11 | PIN JACK BOARD | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 56 | * A-4341-657-A | MAIN BOARD, COMPLETE (AEP,UK) | |
| 56 | * A-4341-662-A | MAIN BOARD, COMPLETE (G,IT) | |
| 57 | * A-4303-343-A | TCB011 BOARD, COMPLETE (AEP,UK) | |
| 57 | * A-4303-344-A | TCB011 BOARD, COMPLETE (G,IT) | |
| 58 | * 1-639-977-11 | CD RST BOARD (FORMER TYPE) | |
| 59 | 1-690-035-11 | WIRE, FLAT TYPE (19 CORE) (FORMER TYPE) | |
| F901 | ⚠1-532-078-00 | FUSE, TIME-LAG T1A | |
| T1 | ⚠1-450-412-11 | TRANSFORMER, POWER | |

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

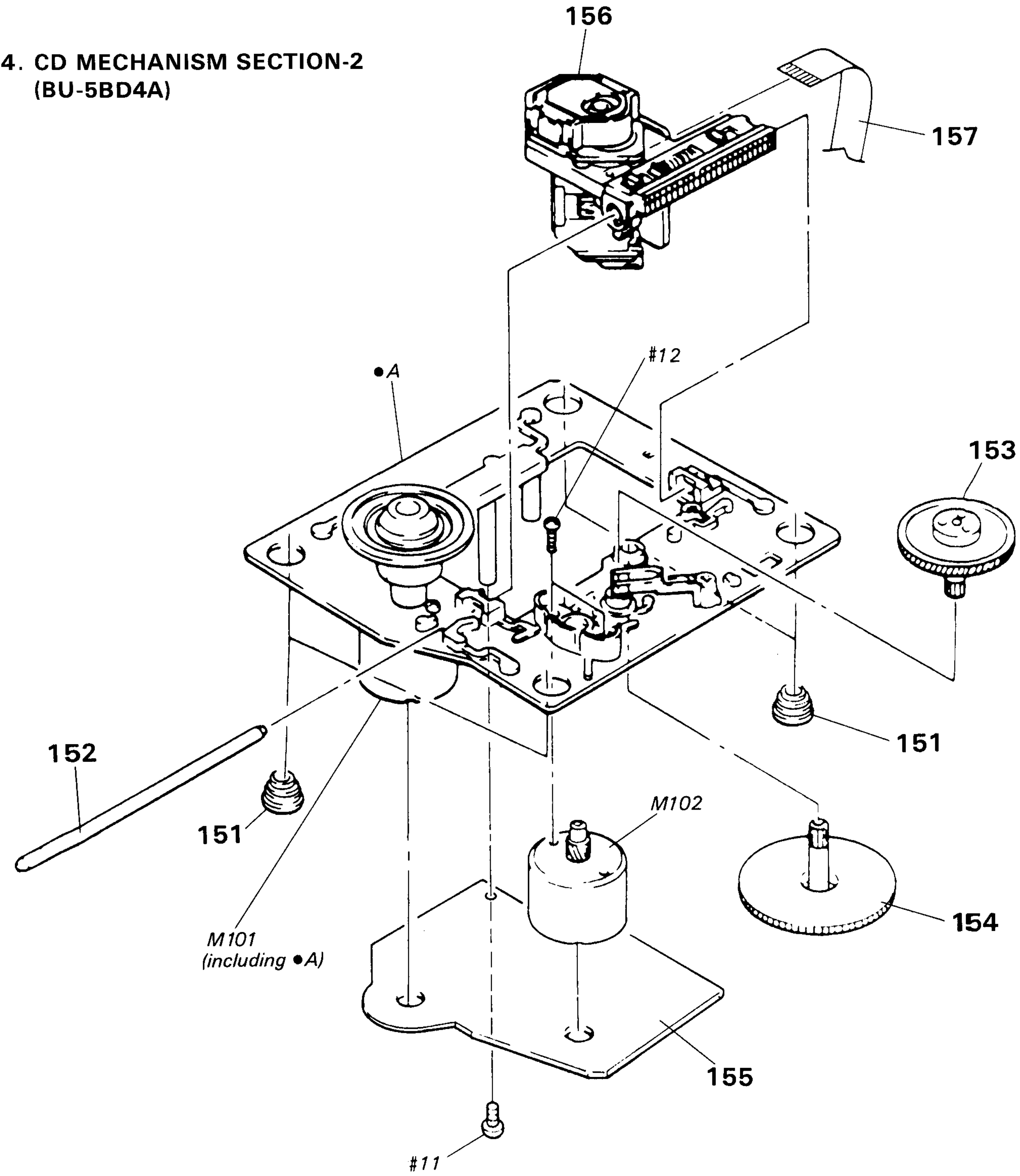
## 5-3. CD MECHANISM SECTION-1
## (CDM13B-5BD4A)


#8
109
102
103
111
#8
110
105
#9
104
108
#10
106
112
112
118
M291
BU-5BD4A
119
#8
117
116
107
113
120
113
115
#10
101
114
#7

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 4-944-012-01 | TABLE, DISC | |
| 102 | A-4604-752-A | HOLDER (MG) ASSY | |
| 103 | 4-929-764-01 | SHAFT (TABLE GUIDE) | |
| 104 | 4-927-620-11 | GEAR (P) | |
| 105 | 4-927-628-01 | GEAR (C) | |
| 106 | 4-929-724-01 | PULLEY (B) | |
| 107 | * 1-638-308-11 | LOADING BOARD | |
| 108 | 4-927-649-01 | BELT | |
| 109 | 4-944-006-01 | BEARING | |
| 110 | * 4-917-583-21 | BRACKET, YOKE | |
| 111 | X-4941-462-1 | CHASSIS (MD) ASSY | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 112 | 4-933-134-01 | SCREW (+PTPWH M2.6X6) | |
| 113 | 4-917-541-01 | SPRING (B) | |
| 114 | 4-929-747-01 | HOLDER (BU) | |
| 115 | 4-927-654-01 | WASHER (LIMITER) | |
| 116 | 3-659-338-00 | SPRING, COMPRESSION | |
| 117 | 4-929-729-01 | CAM (B) | |
| 118 | 4-929-727-01 | CAM (A) | |
| 119 | X-4929-703-1 | ARM ASSY, SWING | |
| 120 | 1-590-530-11 | WIRE, FLAT TYPE | |
| M291 | A-4608-362-A | MOTOR (L) ASSY | |

## 5-4. CD MECHANISM SECTION-2
## (BU-5BD4A)



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 4-933-126-01 | INSULATOR (A) | |
| 152 | 4-917-565-01 | SHAFT, SLED | |
| 153 | 4-917-567-01 | GEAR (M) | |
| 154 | 4-917-564-01 | GEAR (P), FLATNESS | |
| 155 | * A-4617-936-A | BD BOARD, COMPLETE | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 156 | ⚠8-848-144-11 | DEVICE, OPTICAL KSS-240A | |
| 157 | 1-575-001-11 | WIRE, FLAT TYPE (12 CORE) | |
| M101 | X-4917-523-3 | MOTOR ASSY (SPINDLE) | |
| M102 | X-4917-504-1 | MORTOR ASSY (SLED) | |

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**BD**

# SECTION 6
# ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- −XX, −X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA··· : μA···, uPA··· : μPA···,
  uPB··· : μPB···, uPC··· : μPC···,
  uPD··· : μPD···
- CAPACITORS
  uF : μF
- COILS
  uH : μH

NEW TYPE : AEP, G, IT, UK
FORMER TYPE : AEP, UK
G : Germany
IT : Italian

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
|  | * A-4617-936-A | BD BOARD, COMPLETE<br>****************** |  |
|  |  | < CAPACITOR > |  |
| C101 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C102 | 1-163-989-11 | CERAMIC CHIP 0.033uF 10% | 25V |
| C103 | 1-135-155-21 | TANTALUM CHIP 4.7uF 10% | 10V |
| C104 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C105 | 1-126-607-11 | ELECT CHIP 47uF 20% | 4V |
| C106 | 1-126-607-11 | ELECT CHIP 47uF 20% | 4V |
| C107 | 1-126-607-11 | ELECT CHIP 47uF 20% | 4V |
| C108 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C109 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C110 | 1-163-989-11 | CERAMIC CHIP 0.033uF 10% | 25V |
| C111 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C112 | 1-164-232-11 | CERAMIC CHIP 0.01uF | 50V |
| C113 | 1-164-232-11 | CERAMIC CHIP 0.01uF | 50V |
| C114 | 1-164-695-11 | CERAMIC CHIP 0.0022uF 5% | 50V |
| C115 | 1-164-695-11 | CERAMIC CHIP 0.0022uF 5% | 50V |
| C117 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C118 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C119 | 1-164-695-11 | CERAMIC CHIP 0.0022uF 5% | 50V |
| C120 | 1-163-989-11 | CERAMIC CHIP 0.033uF 10% | 25V |
| C151 | 1-163-019-00 | CERAMIC CHIP 0.0068uF 10% | 50V |
| C152 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C153 | 1-163-135-00 | CERAMIC CHIP 560PF 5% | 50V |
| C154 | 1-164-695-11 | CERAMIC CHIP 0.0022uF 5% | 50V |
| C155 | 1-163-023-00 | CERAMIC CHIP 0.015uF 5% | 50V |
| C171 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C172 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C173 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C174 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C201 | 1-163-809-11 | CERAMIC CHIP 0.047uF 10% | 25V |
| C202 | 1-163-145-00 | CERAMIC CHIP 0.0015uF 5% | 50V |
| C203 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C204 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C205 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C206 | 1-163-101-00 | CERAMIC CHIP 22PF 5% | 50V |
| C207 | 1-163-101-00 | CERAMIC CHIP 22PF 5% | 50V |
| C208 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C209 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C210 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C301 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C302 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C303 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C304 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C305 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C306 | 1-163-145-00 | CERAMIC CHIP 0.0015uF 5% | 50V |
| C307 | 1-163-145-00 | CERAMIC CHIP 0.0015uF 5% | 50V |
| C308 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C309 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C310 | 1-163-125-00 | CERAMIC CHIP 220PF 5% | 50V |
| C311 | 1-163-125-00 | CERAMIC CHIP 220PF 5% | 50V |
| C312 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C401 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
| C402 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V |
|  |  | < CONNECTOR > |  |
| CN101 | 1-580-858-11 | SOCKET, CONNECTOR (SMT) 5P |  |
| CN102 | 1-580-866-11 | SOCKET, CONNECTOR (SMT) 12P |  |
| CN103 | 1-580-872-41 | SOCKET, CONNECTOR (SMT) 19P |  |
|  |  | < DIODE > |  |
| D101 | 8-719-976-88 | DIODE DTZ3.9B |  |
| D201 | 8-719-988-62 | DIODE 1SS355 |  |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < IC > | |
| IC101 | 8-752-050-82 | IC CXA1372Q | |
| IC102 | 8-759-823-48 | IC LA6525M | |
| IC103 | 8-759-636-20 | IC M54641FP | |
| IC201 | 8-752-340-37 | IC CXD2505Q | |
| IC202 | 8-759-153-16 | IC uPD75116GF-760-3BE | |
| IC301 | 8-759-506-63 | IC PCM67U | |
| IC302 | 8-759-981-95 | IC RC4558S | |
| | | < CHIP JUMPER > | |
| J201 | 1-216-295-11 | METAL CHIP 0 5% | 1/10W |
| J202 | 1-216-295-11 | METAL CHIP 0 5% | 1/10W |
| | | < TRANSISTOR > | |
| Q101 | 8-729-805-45 | TRANSISTOR 2SC3395 | |
| Q201 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| | | < RESISTOR > | |
| R101 | 1-216-097-00 | METAL CHIP 100K 5% | 1/10W |
| R102 | 1-216-097-00 | METAL CHIP 100K 5% | 1/10W |
| R103 | 1-216-091-00 | METAL CHIP 56K 5% | 1/10W |
| R104 | 1-216-099-00 | METAL CHIP 120K 5% | 1/10W |
| R105 | 1-216-069-00 | METAL CHIP 6.8K 5% | 1/10W |
| R106 | 1-216-061-00 | METAL CHIP 3.3K 5% | 1/10W |
| R107 | 1-216-114-00 | METAL GLAZE 510K 5% | 1/10W |
| R108 | 1-216-105-00 | METAL CHIP 220K 5% | 1/10W |
| R109 | 1-216-061-00 | METAL CHIP 3.3K 5% | 1/10W |
| R110 | 1-216-049-00 | METAL CHIP 1K 5% | 1/10W |
| R111 | 1-216-049-00 | METAL CHIP 1K 5% | 1/10W |
| R112 | 1-216-083-00 | METAL CHIP 27K 5% | 1/10W |
| R113 | 1-216-071-00 | METAL CHIP 8.2K 5% | 1/10W |
| R114 | 1-216-105-00 | METAL CHIP 220K 5% | 1/10W |
| R152 | 1-216-073-00 | METAL CHIP 10K 5% | 1/10W |
| R153 | 1-216-085-00 | METAL CHIP 33K 5% | 1/10W |
| R154 | 1-216-085-00 | METAL CHIP 33K 5% | 1/10W |
| R155 | 1-216-093-00 | METAL CHIP 68K 5% | 1/10W |
| R156 | 1-216-081-00 | METAL CHIP 22K 5% | 1/10W |
| R157 | 1-236-427-11 | NETWORK, RES 18K | |
| R159 | 1-216-079-00 | METAL CHIP 18K 5% | 1/10W |
| R160 | 1-216-049-00 | METAL CHIP 1K 5% | 1/10W |
| R171 | 1-216-001-00 | METAL CHIP 10 5% | 1/10W |
| R172 | 1-216-001-00 | METAL CHIP 10 5% | 1/10W |
| R173 | 1-216-001-00 | METAL CHIP 10 5% | 1/10W |
| R174 | 1-216-001-00 | METAL CHIP 10 5% | 1/10W |
| R201 | 1-216-061-00 | METAL CHIP 3.3K 5% | 1/10W |
| R202 | 1-216-073-00 | METAL CHIP 10K 5% | 1/10W |
| R203 | 1-216-061-00 | METAL CHIP 3.3K 5% | 1/10W |
| R204 | 1-216-049-00 | METAL CHIP 1K 5% | 1/10W |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| R205 | 1-216-089-00 | METAL CHIP 47K 5% | 1/10W |
| R209 | 1-216-081-00 | METAL CHIP 22K 5% | 1/10W |
| R210 | 1-236-427-11 | NETWORK, RES 18K | |
| R212 | 1-236-427-11 | NETWORK, RES 18K | |
| R214 | 1-239-039-11 | RESISTOR, NETWORK 22K | |
| R215 | 1-216-049-00 | METAL CHIP 1K 5% | 1/10W |
| R218 | 1-216-065-00 | METAL CHIP 4.7K 5% | 1/10W |
| R219 | 1-216-073-00 | METAL CHIP 10K 5% | 1/10W |
| R220 | 1-216-001-00 | METAL CHIP 10 5% | 1/10W |
| R222 | 1-236-427-11 | NETWORK, RES 18K | |
| R223 | 1-216-081-00 | METAL CHIP 22K 5% | 1/10W |
| R224 | 1-216-081-00 | METAL CHIP 22K 5% | 1/10W |
| R225 | 1-216-081-00 | METAL CHIP 22K 5% | 1/10W |
| R226 | 1-216-081-00 | METAL CHIP 22K 5% | 1/10W |
| R301 | 1-236-413-11 | NETWORK, RES 1.2K | |
| R303 | 1-216-055-00 | METAL CHIP 1.8K 5% | 1/10W |
| R304 | 1-216-055-00 | METAL CHIP 1.8K 5% | 1/10W |
| R305 | 1-216-097-00 | METAL CHIP 100K 5% | 1/10W |
| R306 | 1-216-097-00 | METAL CHIP 100K 5% | 1/10W |
| | | < VARIABLE RESISTOR > | |
| RV101 | 1-241-395-11 | RES, ADJ, METAL GLAZE 10K | |
| RV102 | 1-241-395-11 | RES, ADJ, METAL GLAZE 10K | |
| | | < SWITCH > | |
| SW101 | 1-572-085-11 | SWITCH, LEAF (LIMIT) | |
| | | < CRYSTAL > | |
| X201 | 1-579-280-11 | VIBRATOR, CRYSTAL 6.9344MH | |
| X202 | 1-579-216-11 | VIBRATOR, CERAMIC 4MHz | |

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* 1-639-977-11 CD RST BOARD (FORMER TYPE)
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| | | | |
|---|---|---|---|
| | | < CAPACITOR > | |
| C1 | 1-126-925-11 | ELECT 470uF 20% | 10V |
| C2 | 1-126-933-11 | ELECT 100uF 20% | 10V |
| C3 | 1-126-933-11 | ELECT 100uF 20% | 10V |
| C4 | 1-126-933-11 | ELECT 100uF 20% | 10V |
| C5 | 1-126-933-11 | ELECT 1uF 20% | 10V |
| C6 | 1-126-933-11 | ELECT 1uF 20% | 10V |
| | | < CONNECTOR > | |
| CN1 | * 1-564-706-11 | CONNECTOR PIN 4P | |
| CN2 | * 1-573-149-11 | CONNECTR PIN | |
| CN3 | * 1-573-149-11 | CONNECTR PIN | |

## CD RST LOADING MAIN PANEL JACK PIN JACK VR

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < DIODE > | |
| D1 | 8-719-912-20 | DIODE 1SS120 | |
| D2 | 8-719-912-20 | DIODE 1SS120 | |
| D3 | 8-719-912-20 | DIODE 1SS120 | |
| | | < IC > | |
| IC1 | 8-759-821-93 | IC LA5601 | |
| IC2 | 8-759-916-12 | IC SN74HC00AN | |
| | | < TRANSISTOR > | |
| Q1 | 8-729-620-02 | TRANSISTOR 2SA1115-EF | |
| Q2 | 8-729-620-05 | TRANSISTOR 2SA2603-EF | |
| | | < RESISTOR > | |
| R1 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R2 | 1-249-397-11 | CARBON 22 5% 1/4W | |
| R3 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R4 | 1-249-433-11 | CARBON 22K 5% 1/4W | |
| R5 | 1-249-405-11 | CARBON 100 5% 1/4W | |
| R6 | 1-249-405-11 | CARBON 100 5% 1/4W | |

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| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * | 1-638-308-11 | LOADING BOARD<br>************* | |
| | | < CONNECTOR > | |
| CN201 | 1-580-918-11 | HOUSING, CONNECTOR 5P | |
| | | < SWITCH > | |
| S291 | 1-571-924-11 | SWITCH, LEAF (LOAD OUT) | |
| S292 | 1-571-924-11 | SWITCH, LEAF (LOAD IN) | |

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| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * | A-4341-657-A | MAIN BOARD, COMPLETE (AEP, UK) | |
| * | A-4341-662-A | MAIN BOARD, COMPLETE (G, IT)<br>******************** | |
| * | A-4341-658-A | PANEL BOARD, COMPLETE (AEP, UK) | |
| * | A-4341-664-A | PANEL BOARD, COMPLETE (G) | |
| * | A-4341-707-A | PANEL BOARD, COMPLETE (IT)<br>********************* | |
| * | 1-638-882-11 | JACK BOARD<br>********** | |
| * | 1-638-883-11 | PIN JACK BOARD<br>************** | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * | 1-638-884-11 | VR BOARD<br>******** | |
| * | 4-944-202-01 | HOLDER (FL) | |
| * | 4-946-050-11 | CUSHION (FL) | |
| | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| | | < CAPACITOR > | |
| C1 | 1-126-925-11 | ELECT 470uF 20% 10V | (NEW TYPE) |
| C2 | 1-126-933-11 | ELECT 100uF 20% 16V | (NEW TYPE) |
| C3 | 1-126-933-11 | ELECT 100uF 20% 16V | (NEW TYPE) |
| C4 | 1-126-933-11 | ELECT 100uF 20% 16V | (NEW TYPE) |
| C5 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | (NEW TYPE) |
| C6 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | (NEW TYPE) |
| C101 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C102 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C103 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C104 | 1-126-157-11 | ELECT 10uF 20% 16V | |
| C105 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | |
| C106 | 1-163-018-00 | CERAMIC CHIP 0.0056uF 5% 50V | |
| C107 | 1-163-012-00 | CERAMIC CHIP 0.0018uF 10% 50V | |
| C108 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | |
| C109 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | (AEP, UK) |
| C109 | 1-163-125-00 | CERAMIC CHIP 220PF 5% 50V | (G, IT) |
| C110 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C151 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C152 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C153 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C154 | 1-126-157-11 | ELECT 10uF 20% 16V | |
| C155 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | |
| C156 | 1-163-018-00 | CERAMIC CHIP 0.0056uF 5% 50V | |
| C157 | 1-163-012-00 | CERAMIC CHIP 0.0018uF 10% 50V | |
| C158 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | |
| C159 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | (AEP, UK) |
| C159 | 1-163-125-00 | CERAMIC CHIP 220PF 5% 50V | (G, IT) |
| C160 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C203 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C204 | 1-164-222-11 | CERAMIC CHIP 0.22uF 25V | |
| C205 | 1-164-492-11 | CERAMIC CHIP 0.15uF 10% 16V | |
| C206 | 1-163-038-00 | CERAMIC CHIP 0.1uF 25V | |
| C207 | 1-164-343-11 | CERAMIC CHIP 0.056uF 10% 25V | |
| C208 | 1-163-035-00 | CERAMIC CHIP 0.047uF 50V | |
| C209 | 1-163-033-00 | CERAMIC CHIP 0.022uF 50V | |
| C210 | 1-163-024-00 | CERAMIC CHIP 0.018uF 10% 50V | |
| C211 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | |

| Ref.No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C212 | 1-163-019-00 | CERAMIC CHIP | 0.0068uF | 10% | 50V |
| C213 | 1-163-016-00 | CERAMIC CHIP | 0.0039uF | 10% | 50V |
| C214 | 1-163-014-00 | CERAMIC CHIP | 0.0027uF | 10% | 50V |
| C215 | 1-163-011-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C216 | 1-163-010-11 | CERAMIC CHIP | 0.0012uF | 10% | 50V |
| C217 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C218 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C219 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C220 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C221 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C222 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C223 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C224 | 1-163-833-00 | CERAMIC CHIP | 0.068uF | | 25V |
| C225 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C226 | 1-163-833-00 | CERAMIC CHIP | 0.068uF | | 25V |
| C229 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C230 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C231 | 1-126-096-11 | ELECT | 10uF | 20% | 35V |
| C232 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C233 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C234 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C236 | 1-163-035-00 | CERAMIC CHIP | 0.047uF | | 50V |
| C237 | 1-126-935-11 | ELECT | 470uF | 20% | 16V |
| C238 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C239 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C241 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C243 | 1-136-173-00 | FILM | 0.47uF | 5% | 50V |
| C244 | 1-136-173-00 | FILM | 0.47uF | 5% | 50V |
| C245 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C246 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C247 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C253 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C254 | 1-164-222-11 | CERAMIC CHIP | 0.22uF | | 25V |
| C255 | 1-164-492-11 | CERAMIC CHIP | 0.15uF | 10% | 16V |
| C256 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C257 | 1-164-343-11 | CERAMIC CHIP | 0.056uF | 10% | 25V |
| C258 | 1-163-035-00 | CERAMIC CHIP | 0.047uF | | 50V |
| C259 | 1-163-033-00 | CERAMIC CHIP | 0.022uF | | 50V |
| C260 | 1-163-024-00 | CERAMIC CHIP | 0.018uF | 10% | 50V |
| C261 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C262 | 1-163-019-00 | CERAMIC CHIP | 0.0068uF | 10% | 50V |
| C263 | 1-163-016-00 | CERAMIC CHIP | 0.0039uF | 10% | 50V |
| C264 | 1-163-014-00 | CERAMIC CHIP | 0.0027uF | 10% | 50V |
| C265 | 1-163-011-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C266 | 1-163-010-11 | CERAMIC CHIP | 0.0012uF | 10% | 50V |
| C267 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C268 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C269 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C270 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C271 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C272 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C273 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C274 | 1-163-833-00 | CERAMIC CHIP | 0.068uF | | 25V |
| C275 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C276 | 1-163-833-00 | CERAMIC CHIP | 0.068uF | | 25V |
| C278 | 1-126-967-11 | ELECT | 47uF | 20% | 50V |
| C279 | 1-126-967-11 | ELECT | 47uF | 20% | 50V |
| C280 | 1-126-948-11 | ELECT | 100uF | 20% | 35V |
| C281 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C282 | 1-126-948-11 | ELECT | 100uF | 20% | 35V |
| C285 | 1-126-937-11 | ELECT | 4700uF | 20% | 16V |
| C286 | 1-126-943-11 | ELECT | 2200uF | 20% | 25V |
| C287 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C288 | 1-126-096-11 | ELECT | 10uF | 20% | 35V |
| C289 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C290 | 1-124-477-11 | ELECT | 47uF | 20% | 25V |
| C291 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C292 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C295 | 1-126-096-11 | ELECT | 10uF | 20% | 35V |
| C296 | 1-126-096-11 | ELECT | 10uF | 20% | 35V |
| C297 | 1-126-096-11 | ELECT | 10uF | 20% | 35V |
| C301 | 1-126-925-11 | ELECT | 470uF | 20% | 10V |
| C302 | 1-126-925-11 | ELECT | 470uF | 20% | 10V |
| C303 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C306 | 1-163-095-00 | CERAMIC CHIP | 12PF | 5% | 50V |
| C307 | 1-163-095-00 | CERAMIC CHIP | 12PF | 5% | 50V |
| C311 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C312 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C313 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C314 | 1-125-486-11 | DUBLE LAYERS | 0.22F | | 5.5V |
| C315 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C341 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| C342 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| C361 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C362 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C363 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C364 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C365 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C366 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C367 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C368 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C369 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C370 | 1-163-018-00 | CERAMIC CHIP | 0.0056uF | 5% | 50V |
| C371 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C372 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C373 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C374 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C381 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |

## MAIN PANEL JACK PIN JACK VR

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C382 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C383 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C384 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C391 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C392 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C395 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C396 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C1101 | 1-163-117-11 | CERAMIC CHIP | 100PF | 5% | 50V<br>(G, IT) |
| C1151 | 1-163-117-11 | CERAMIC CHIP | 100PF | 5% | 50V<br>(G, IT) |
| C2201 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2202 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2203 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C2204 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C2205 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2206 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C2208 | 1-126-926-11 | ELECT | 1000uF | 20% | 10V |
| C2209 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2210 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C2211 | 1-126-923-11 | ELECT | 220uF | 20% | 10V |
| C2212 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2216 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2217 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2218 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2219 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2220 | 1-163-036-00 | CERAMIC CHIP | 0.068uF | | 50V |
| C2221 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C2222 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V<br>(G, IT) |
| C2223 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V<br>(G, IT) |
| C2251 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2252 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C2253 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C2254 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C2256 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C2259 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2260 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C2271 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C2272 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2273 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2274 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2275 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2276 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2277 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2278 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C2279 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2280 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2285 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C2286 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C2288 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C2289 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C2290 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| C2291 | 1-126-947-91 | ELECT | 47uF | 20% | 35V |
| C2371 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C2372 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3301 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3302 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3303 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3304 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3305 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C3306 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3371 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C3372 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C3376 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3381 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C3382 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |

< CONNECTOR >

| | | | |
|---|---|---|---|
| CN1 | * | 1-573-107-11 | CONNECTOR, PC BOARD (PLUG) |
| CN2 | * | 1-573-107-11 | CONNECTOR, PC BOARD (PLUG) |
| CN4 | * | 1-573-107-11 | CONNECTOR, PC BOARD (PLUG) |
| CN5 | * | 1-573-107-11 | CONNECTOR, PC BOARD (PLUG) |
| CN7 | * | 1-573-107-11 | CONNECTOR, PC BOARD (PLUG) |
| CN101 | * | 1-566-859-11 | SOCKET, CONNECTOR 15P (SYSTEM CONTROL) |
| CN102 | * | 1-565-971-11 | SOCKET, CONNECTOR (PC BOARD) 9P |
| CN103 | * | 1-565-968-11 | PIN, CONNECTOR (PC BOARD) 9P |
| CN201 | * | 1-573-084-11 | CONNECTOR, FPC (NON ZIF) 20P |
| CN202 | * | 1-573-084-11 | CONNECTOR, FPC (NON ZIF) 20P |
| CN203 | * | 1-573-085-11 | CONNECTOR, FPC (NON ZIF) 19P |
| CN204 | * | 1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN205 | * | 1-564-714-11 | PIN, CONNECTOR (SMALL TYPE) 12P |
| CN301 | * | 1-573-084-11 | CONNECTOR, FPC (NON ZIF) 20P |
| CN302 | * | 1-573-084-11 | CONNECTOR, FPC (NON ZIF) 20P |
| CN351 | * | 1-561-651-00 | SOCKET, CONNECTOR 7P |
| CN352 | | 1-569-132-11 | PIN, CONNECTOR 7P |
| CN353 | | 1-573-712-11 | CONNECTOR, BOARD TO BOARD 8P |
| CN361 | | 1-562-088-00 | SOCKET, CONNECTOR 9P |
| CN362 | | 1-560-943-00 | PIN, CONNECTOR 9P |

< DIODE >

| | | | | |
|---|---|---|---|---|
| D1 | 8-719-988-62 | DIODE | 1SS355 | (NEW TYPE) |
| D2 | 8-719-988-62 | DIODE | 1SS355 | (NEW TYPE) |
| D3 | 8-719-988-62 | DIODE | 1SS355 | (NEW TYPE) |
| D201 | 8-719-988-62 | DIODE | 1SS355 | |
| D202 | 8-719-988-62 | DIODE | 1SS355 | |
| D203 | 8-719-988-62 | DIODE | 1SS355 | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| D205 | 8-719-976-96 | DIODE DTZ4.7C | |
| D281 | 8-719-210-33 | DIODE EC10DS2 | |
| D282 | 8-719-210-33 | DIODE EC10DS2 | |
| D283 | 8-719-977-81 | DIODE DTZ33B | |
| D284 | 8-719-988-62 | DIODE 1SS355 | |
| D286 | 8-719-210-33 | DIODE EC10DS2 | |
| D287 | 8-719-210-33 | DIODE EC10DS2 | |
| D288 | 8-719-210-39 | DIODE EC10QS-04 | |
| D289 | 8-719-210-39 | DIODE EC10QS-04 | |
| D290 | 8-719-977-36 | DIODE DTZ12B | |
| D291 | 8-719-988-62 | DIODE 1SS355 | |
| D292 | 8-719-977-07 | DIODE DTZ6.2B | |
| D293 | 8-719-988-62 | DIODE 1SS355 | |
| D294 | 8-719-988-62 | DIODE 1SS355 | |
| D301 | 8-719-977-03 | DIODE DTZ5.6B | |
| D302 | 8-719-977-03 | DIODE DTZ5.6B | |
| D311 | 8-719-988-62 | DIODE 1SS355 | |
| D312 | 8-719-988-62 | DIODE 1SS355 | |
| D313 | 8-719-988-62 | DIODE 1SS355 | |
| D314 | 8-719-988-62 | DIODE 1SS355 | |
| D316 | 8-719-301-39 | DIODE SEL2210S | |
| D317 | 8-719-301-39 | DIODE SEL2210S | |
| D318 | 8-719-301-39 | DIODE SEL2210S | |
| D319 | 8-719-301-39 | DIODE SEL2210S | |
| D320 | 8-719-301-39 | DIODE SEL2210S | |
| D321 | 8-719-301-39 | DIODE SEL2210S | |
| D322 | 8-719-301-39 | DIODE SEL2210S | |
| D323 | 8-719-301-39 | DIODE SEL2210S | |
| D324 | 8-719-988-62 | DIODE 1SS355 | |
| D325 | 8-719-988-62 | DIODE 1SS355 | |
| D326 | 8-719-988-62 | DIODE 1SS355 | |
| D327 | 8-719-988-62 | DIODE 1SS355 | |
| D328 | 8-719-988-62 | DIODE 1SS355 | |
| D329 | 8-719-988-62 | DIODE 1SS355 | |
| D330 | 8-719-988-62 | DIODE 1SS355 | |
| D331 | 8-719-988-62 | DIODE 1SS355 | |
| D391 | 8-719-988-62 | DIODE 1SS355 | |

< FILTER >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| FL301 | 1-519-637-11 | INDICATOR TUBE, FLUORESCENT | |

< IC >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| IC1 | 8-759-821-93 | IC LA5601 (NEW TYPE) | |
| IC101 | 8-759-981-95 | IC RC4558S | |
| IC201 | 8-759-516-41 | IC CD4052BCM | |
| IC202 | 8-759-516-41 | IC CD4052BCM | |
| IC203 | 8-759-981-95 | IC RC4558S | |
| IC204 | 8-759-516-47 | IC CD4066BCM | |
| IC205 | 8-759-636-57 | IC CXA1492Q | |
| IC206 | 8-759-981-95 | IC RC4558S | |
| IC207 | 8-759-823-46 | IC LA5603 | |
| IC301 | 8-759-991-11 | IC XR1091DCP | |
| IC302 | 8-759-516-41 | IC CD4052BCM | |
| IC303 | 8-759-140-57 | IC uPD4990AG | |
| IC304 | 8-759-500-31 | IC X24C01P | |
| IC305 | 8-759-154-53 | IC uPD78134GF-032-3B9 | |
| IC306 | 8-759-512-44 | IC SN755703 | |
| IC307 | 8-759-512-44 | IC SN755703 | |
| IC308 | 8-749-922-36 | IC GP1U50XB | |
| IC309 | 8-759-927-29 | IC SN74HCU04ANS | |
| IC361 | 8-759-981-95 | IC RC4558S | |
| IC362 | 8-759-636-55 | IC M5218AFP | |
| IC395 | 8-759-820-62 | IC LB1639 | |

< JACK >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| J101 | 1-565-320-11 | JACK, PIN 6P (VIDEO/AUX, DAT) | |
| J361 | 1-562-837-21 | JACK (MIX MIC) | |
| J362 | 1-562-837-21 | JACK (HEADPHONES) | |

< CHIP JUMPER >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| JW201 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW202 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW203 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW204 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW209 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW210 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW212 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW282 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW284 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW285 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW286 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW287 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW304 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW305 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW306 | 1-216-296-00 | METAL CHIP 0 5% 1/8W | |
| JW351 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW352 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW353 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW354 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW355 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW357 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |

< COIL >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| L2201 | 1-410-393-11 | INDUCTOR, CHIP 100uH | |
| L2202 | 1-408-789-21 | INDUCTOR, CHIP 100uH | |
| L2203 | 1-410-393-11 | INDUCTOR, CHIP 100uH | |

## MAIN PANEL JACK PIN JACK VR

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < TRANSISTOR > | |
| Q1 | 8-729-602-36 | TRANSISTOR 2SA1602 | (NEW TYPE) |
| Q2 | 8-729-602-21 | TRANSISTOR 2SC4154-F | (NEW TYPE) |
| Q3 | 8-729-810-19 | TRANSISTOR 2SC4396 | (NEW TYPE) |
| Q4 | 8-729-810-19 | TRANSISTOR 2SC4396 | (NEW TYPE) |
| Q201 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q202 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q203 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q204 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q205 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q206 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q281 | 8-729-209-15 | TRANSISTOR 2SD2012 | |
| Q283 | 8-729-209-15 | TRANSISTOR 2SD2012 | |
| Q284 | 8-729-810-28 | TRANSISTOR 2SC4398 | |
| Q286 | 8-729-810-16 | TRANSISTOR 2SA1678 | |
| Q287 | 8-729-810-28 | TRANSISTOR 2SC4398 | |
| Q289 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q290 | 8-729-808-01 | TRANSISTOR 2SD1622-S | |
| Q311 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q312 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q313 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q314 | 8-729-810-28 | TRANSISTOR 2SC4398 | |
| | | < RESISTOR > | |
| R1 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | (NEW TYPE) |
| R2 | 1-216-009-00 | METAL CHIP 22 5% 1/10W | (NEW TYPE) |
| R3 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | (NEW TYPE) |
| R4 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (NEW TYPE) |
| R5 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (NEW TYPE) |
| R101 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R102 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R103 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R104 | 1-216-115-00 | METAL CHIP 560K 5% 1/10W | |
| R105 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R106 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R107 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R108 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R109 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R110 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| R151 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R152 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R153 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R154 | 1-216-115-00 | METAL CHIP 560K 5% 1/10W | |
| R155 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R156 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R157 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R158 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R159 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R160 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| R181 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R182 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R183 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R184 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R185 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R186 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R187 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R188 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R189 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R190 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R191 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R192 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R193 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R194 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R195 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R196 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R197 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R198 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R199 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R201 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R202 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R203 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R205 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R207 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R208 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R209 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R210 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R211 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R212 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R213 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R214 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R215 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R216 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R217 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R218 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R219 | 1-216-083-00 | METAL CHIP 27K 5% 1/10W | |
| R220 | 1-216-053-00 | METAL CHIP 1.5K 5% 1/10W | |
| R221 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R222 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R223 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R224 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R251 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R252 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R253 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R255 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R257 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R258 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R259 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R260 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R261 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R262 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R263 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R264 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R265 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R266 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R267 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R268 | 1-216-121-00 | METAL CHIP | 1M | 5% | 1/10W | |
| R269 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W | |
| R270 | 1-216-053-00 | METAL CHIP | 1. 5K | 5% | 1/10W | |
| R271 | 1-216-121-00 | METAL CHIP | 1M | 5% | 1/10W | |
| R272 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R273 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R274 | 1-216-057-00 | METAL CHIP | 2. 2K | 5% | 1/10W | |
| R275 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R276 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | (FORMER TYPE) |
| R277 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R281 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R282 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R283 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R284 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R285 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W | |
| R286 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W | |
| R287 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R291 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R292 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R293 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R294 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R295 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R298 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R299 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R300 | 1-216-077-00 | METAL CHIP | 15K | 5% | 1/10W | |
| R301 | 1-216-017-00 | METAL CHIP | 47 | 5% | 1/10W | |
| R302 | 1-216-017-00 | METAL CHIP | 47 | 5% | 1/10W | |
| R303 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R304 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R305 | 1-216-053-00 | METAL CHIP | 1. 5K | 5% | 1/10W | |
| R306 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R307 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R308 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R309 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R312 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | (AEP, UK) |
| R313 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R314 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | (G, IT) |
| R315 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R316 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R317 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R318 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R319 | 1-216-065-00 | METAL CHIP | 4. 7K | 5% | 1/10W | |
| R320 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R321 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R322 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R323 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W | |
| R324 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R325 | 1-216-053-00 | METAL CHIP | 1. 5K | 5% | 1/10W | |
| R326 | 1-216-057-00 | METAL CHIP | 2. 2K | 5% | 1/10W | |
| R327 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R328 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R329 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W | |
| R330 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R331 | 1-216-053-00 | METAL CHIP | 1. 5K | 5% | 1/10W | |
| R332 | 1-216-057-00 | METAL CHIP | 2. 2K | 5% | 1/10W | |
| R333 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R334 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R335 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W | |
| R336 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R337 | 1-216-053-00 | METAL CHIP | 1. 5K | 5% | 1/10W | |
| R338 | 1-216-057-00 | METAL CHIP | 2. 2K | 5% | 1/10W | |
| R340 | 1-216-061-00 | METAL CHIP | 3. 3K | 5% | 1/10W | |
| R341 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R342 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W | |
| R343 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R344 | 1-216-053-00 | METAL CHIP | 1. 5K | 5% | 1/10W | |
| R345 | 1-216-057-00 | METAL CHIP | 2. 2K | 5% | 1/10W | |
| R346 | 1-216-065-00 | METAL CHIP | 4. 7K | 5% | 1/10W | |
| R347 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R348 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R349 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R350 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R351 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R352 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W | |
| R353 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W | |
| R354 | 1-216-029-00 | METAL CHIP | 150 | 5% | 1/10W | |
| R355 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W | |
| R356 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R357 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R358 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R360 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R361 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R362 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W | |
| R363 | 1-216-031-00 | METAL CHIP | 180 | 5% | 1/10W | |
| R364 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R365 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R366 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R367 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |

## MAIN PANEL JACK PIN JACK VR POWER

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R368 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R369 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R370 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R371 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R372 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R373 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R374 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W | |
| R375 | 1-216-017-00 | METAL CHIP | 47 | 5% | 1/10W | |
| R376 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R381 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R382 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R383 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R384 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W | |
| R385 | 1-216-017-00 | METAL CHIP | 47 | 5% | 1/10W | |
| R386 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R391 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R392 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R393 | 1-216-121-00 | METAL CHIP | 1M | 5% | 1/10W | |
| R395 | 1-216-035-00 | METAL CHIP | 270 | 5% | 1/10W | |
| R396 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R397 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W | |
| R1001 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R1051 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R2201 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R2202 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R2203 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R2204 | 1-216-115-00 | METAL CHIP | 560K | 5% | 1/10W | |
| R2205 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R2206 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W | |
| R2251 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R2252 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R2253 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R2254 | 1-216-115-00 | METAL CHIP | 560K | 5% | 1/10W | |
| R2255 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R2256 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W | |
| R3307 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R3308 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R3310 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R3371 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R3381 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |

< VARIABLE RESISTOR >

| | | |
|---|---|---|
| RV361 | 1-241-140-11 | RES, VAR, CARBON 10K (MIC LEVEL) |
| RV395 | 1-241-418-11 | RES, VAR, CARBON 10K (VOLUME) |

< SWITCH >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| S311 | 1-572-184-11 | SWITCH, KEYBOARD (FUNCTION) | |
| S312 | 1-572-184-11 | SWITCH, KEYBOARD (RESET) | |
| S313 | 1-572-184-11 | SWITCH, KEYBOARD (EQ ON/OFF) | |
| S314 | 1-572-184-11 | SWITCH, KEYBOARD (SURROUND) | |
| S315 | 1-572-184-11 | SWITCH, KEYBOARD (DBFB) | |
| S316 | 1-572-184-11 | SWITCH, KEYBOARD (WAKE UP) | |
| S317 | 1-572-184-11 | SWITCH, KEYBOARD (OPEN/CLOSE) | |
| S318 | 1-572-184-11 | SWITCH, KEYBOARD (■) | |
| S319 | 1-572-184-11 | SWITCH, KEYBOARD (▷ ▮▮) | |
| S320 | 1-572-184-11 | SWITCH, KEYBOARD (▶▶ ▷▷\|) | |
| S321 | 1-572-184-11 | SWITCH, KEYBOARD (\|◁◁ ◀◀) | |
| S322 | 1-572-184-11 | SWITCH, KEYBOARD (EDIT/TIME FADE) | |
| S323 | 1-572-184-11 | SWITCH, KEYBOARD (NEXT/MEMORY) | |
| S324 | 1-572-184-11 | SWITCH, KEYBOARD (TIMER SET) | |
| S325 | 1-572-184-11 | SWITCH, KEYBOARD (CONTINUE) | |
| S326 | 1-572-184-11 | SWITCH, KEYBOARD (SHUFFLE) | |
| S327 | 1-572-184-11 | SWITCH, KEYBOARD (PROGRAM) | |
| S328 | 1-572-184-11 | SWITCH, KEYBOARD (CHECK) | |
| S329 | 1-572-184-11 | SWITCH, KEYBOARD (SYSTEM POWER ON/OFF) | |
| S330 | 1-572-184-11 | SWITCH, KEYBOARD (RESET/TUNING) | |
| S331 | 1-572-184-11 | SWITCH, KEYBOARD (+) | |
| S332 | 1-572-184-11 | SWITCH, KEYBOARD (BAND) | |
| S333 | 1-572-184-11 | SWITCH, KEYBOARD (-) | |
| S334 | 1-572-184-11 | SWITCH, KEYBOARD (CLOCK SET) | |
| S335 | 1-572-184-11 | SWITCH, KEYBOARD (TIMER SET) | |
| S336 | 1-572-184-11 | SWITCH, KEYBOARD (RESET) | |

< TERMINAL BOARD >

| | | |
|---|---|---|
| TB101 | * 1-537-138-31 | TERMINAL BOARD (ANT) |

< CLAMP >

| | | |
|---|---|---|
| TP105 | * 3-683-631-01 | CLAMP |

< CRYSTAL >

| | | |
|---|---|---|
| X301 | 1-527-997-21 | VIBRATOR, CRYSTAL |
| X302 | Y 1-577-364-11 | VIBRATOR, CERAMIC 12MHz |

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* A-4341-652-A POWER BOARD, COMPLETE (AEP.IT)
* A-4341-661-A POWER BOARD, COMPLETE (G)
* A-4341-653-A POWER BOARD, COMPLETE (UK)

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* 1-533-213-31 HOLDER, FUSE

< CAPACITOR >

| | | | | | |
|---|---|---|---|---|---|
| C801 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C802 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V<br>(AEP, UK) |
| C803 | 1-126-233-11 | ELECT | 22uF | 20% | 50V |

## POWER

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C804 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C805 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C806 | 1-102-114-00 | CERAMIC | 470PF | 10% | 50V<br>(G, IT) |
| C807 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V<br>(G, IT) |
| C851 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C852 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V<br>(AEP, UK) |
| C853 | 1-126-233-11 | ELECT | 22uF | 20% | 50V |
| C854 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C855 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C856 | 1-102-114-00 | CERAMIC | 470PF | 10% | 50V<br>(G, IT) |
| C857 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V<br>(G, IT) |
| C873 | 1-126-233-11 | ELECT | 22uF | 20% | 50V |
| C874 | 1-124-910-11 | ELECT | 47uF | 20% | 50V |
| C875 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C876 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C877 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C878 | 1-124-910-11 | ELECT | 47uF | 20% | 50V |
| C879 | 1-124-910-11 | ELECT | 47uF | 20% | 50V |
| C880 | 1-124-910-11 | ELECT | 47uF | 20% | 50V |
| C901 | 1-124-618-11 | ELECT | 2200uF | 20% | 35V |
| C902 | 1-124-618-11 | ELECT | 2200uF | 20% | 35V |
| C903 | 1-136-850-11 | FILM | 0.1uF | 10% | 63V |
| C904 | 1-136-850-11 | FILM | 0.1uF | 10% | 63V |
| C905 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C906 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C8002 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V<br>(G, IT) |
| C8030 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C9001 | 1-136-850-11 | FILM | 0.1uF | 10% | 63V |
| C9002 | 1-101-004-00 | CERAMIC | 0.01uF | 10% | 50V<br>(G, IT) |

< BREAKER >

| Ref. No. | Part No. | Description |
|---|---|---|
| CB801 | 1-532-564-00 | BREAKER, CIRCUIT 2.2A |
| CB851 | 1-532-564-00 | BREAKER, CIRCUIT 2.2A |

< CONNECTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| CN801 | * 1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN901 | ⚠1-526-931-11 | INLET, AC |

< DIODE >

| Ref. No. | Part No. | Description | |
|---|---|---|---|
| D801 | 8-719-912-20 | DIODE | 1SS120 |
| D909 | 8-719-312-09 | DIODE | RBA-402 |

< IC >

| Ref. No. | Part No. | Description | |
|---|---|---|---|
| IC801 | 8-749-920-13 | IC | STK4132MK2 |

< IC LINK >

| Ref. No. | Part No. | Description |
|---|---|---|
| ICP951 | ⚠1-532-846-21 | LINK, IC |
| ICP952 | ⚠1-532-846-21 | LINK, IC |

< COIL >

| Ref. No. | Part No. | Description |
|---|---|---|
| L901 | ⚠1-410-397-21 | FERRITE BEED INDUCTOR<br>(G, IT) |

< TRANSISTOR >

| Ref. No. | Part No. | Description | |
|---|---|---|---|
| Q801 | 8-729-900-80 | TRANSISTOR | DTC114ES |

< RESISTOR >

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R801 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R802 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R803 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R804 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R805 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W | |
| R807 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W<br>(G, IT) | |
| R851 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R852 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R853 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R854 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R855 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W | |
| R856 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R857 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W<br>(G, IT) | |
| R871 | 1-249-440-11 | CARBON | 82K | 5% | 1/4W | |
| R872 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R873 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R874 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W | |
| R875 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R876 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R877 | ⚠1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W | F |
| R878 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R879 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R880 | ⚠1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W | F |
| R881 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R882 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R883 | ⚠1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W | F |
| R902 | ⚠1-212-942-00 | FUSIBLE | 2.2 | 5% | 1/2W | F |
| R8001 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R8501 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W | |
| R9001 | ⚠1-212-942-00 | FUSIBLE | 2.2 | 5% | 1/2W | F |

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

## POWER TCB011

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R9002 | ⚠1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W F |

< TERMINAL BOARD >

| | | |
|---|---|---|
| TB801 | * 1-537-240-21 | TERMINAL BOARD (CHECKER PIN) (AEP, IT, UK) |
| TB801 | * 1-537-156-21 | TERMINAL BOARD (SPEAKER) (G) |

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* A-4303-343-A TCB011 BOARD, COMPLETE (AEP, UK)
* A-4303-344-A TCB011 BOARD, COMPLETE (G, IT)
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< CAPACITOR >

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C1 | 1-124-120-11 | ELECT | 220uF | 20% | 25V |
| C2 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C3 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C4 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V<br>(G, IT) |
| C5 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C6 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C7 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V<br>(G, IT) |
| C8 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C9 | 1-163-012-00 | CERAMIC CHIP | 0.0018uF | | 50V |
| C10 | 1-163-011-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C21 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C22 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C23 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C24 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C25 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C26 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C27 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C29 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C31 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C32 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C33 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C34 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| C35 | 1-163-033-00 | CERAMIC CHIP | 0.022uF | | 50V |
| C36 | 1-163-033-00 | CERAMIC CHIP | 0.022uF | | 50V |
| C51 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C52 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C53 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C54 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C55 | 1-163-105-00 | CERAMIC CHIP | 33PF | 5% | 50V<br>(AEP, UK) |
| C55 | 1-163-135-00 | CERAMIC CHIP | 560PF | 5% | 50V<br>(G, IT) |
| C56 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V<br>(G, IT) |
| C57 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C58 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C59 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C60 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C61 | 1-163-022-00 | CERAMIC CHIP | 0.012uF | 10% | 50V |
| C62 | 1-163-022-00 | CERAMIC CHIP | 0.012uF | 10% | 50V |
| C63 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C64 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C65 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C66 | 1-164-346-11 | CERAMIC CHIP | 1.0uF | | 16V |
| C69 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C70 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C71 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C72 | 1-124-120-11 | ELECT | 220uF | 20% | 25V |
| C73 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C74 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C75 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C76 | 1-126-101-11 | ELECT | 100uF | 20% | 16V |
| C79 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C80 | 1-124-472-11 | ELECT | 470uF | 20% | 10V |
| C81 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C82 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C83 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V<br>(G, IT) |

< FILTER >

| | | |
|---|---|---|
| CF1 | 1-567-389-11 | FILTER, CERAMIC |
| CF2 | 1-567-389-11 | FILTER, CERAMIC<br>(G, IT) |
| CF51 | 1-567-389-11 | FILTER, CERAMIC |

< CONNECTOR >

| | | |
|---|---|---|
| CN1 | 1-573-105-11 | CONNECTOR, PC BOARD (RECEPTACLE) |
| CN2 | 1-573-105-11 | CONNECTOR, PC BOARD (RECEPTACLE) |
| CN3 | 1-573-105-11 | CONNECTOR, PC BOARD (RECEPTACLE) |
| CN4 | 1-573-105-11 | CONNECTOR, PC BOARD (RECEPTACLE) |
| CN5 | 1-573-105-11 | CONNECTOR, PC BOARD (RECEPTACLE) |

< DIODE >

| | | | |
|---|---|---|---|
| D21 | 8-719-977-03 | DIODE | DTZ5.6B |
| D51 | 8-719-988-62 | DIODE | 1SS355 |

< FRONT END >

| | | |
|---|---|---|
| FE1 | 1-463-957-11 | FRONT END (FM 4 GANG)<br>(G, IT) |
| FE1 | 1-465-673-11 | FRONT END (2 BAND)<br>(AEP, UK) |
| FE2 | 1-239-030-11 | ENCAPSULATED COMPONENT (MW) |
| FE3 | 1-239-049-11 | ENCAPSULATED COMPONENT (LW) |

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < FILTER > | |
| FL51 | 1-239-029-11 | ENCAPSULATED COMPONENT | (G, IT) |
| | | < IC > | |
| IC21 | 8-759-821-43 | IC LC7218M-TP | |
| IC51 | 8-759-823-68 | IC LA1851NM-TP1 | |
| | | < TRANSFORMER > | |
| IFT51 | 1-404-954-11 | TRANSFORMER, DISCRIMINATOR | |
| IFT52 | 1-404-713-11 | TRANSFORMER, IF | |
| | | < CHIP JUMPER > | |
| JW1 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW2 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | (AEP, UK) |
| JW4 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW5 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| JW7 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| | | < COIL > | |
| L1 | 1-408-793-21 | INDUCTOR, CHIP 220uH | |
| L51 | 1-408-798-00 | CHIP INDUCTOR 1mH | |
| | | < LPF > | |
| LPF51 | 1-235-221-00 | FILTER, LOW PASS | |
| | | < TRANSISTOR > | |
| Q1 | 8-729-804-72 | TRANSISTOR 2SC2814-F4 | |
| Q2 | 8-729-804-72 | TRANSISTOR 2SC2814-F4 | (G, IT) |
| Q3 | 8-729-810-16 | TRANSISTOR 2SA1678 | |
| Q4 | 8-729-602-36 | TRANSISTOR 2SA1602 | |
| Q5 | 8-729-810-28 | TRANSISTOR 2SC4398 | |
| Q6 | 8-729-602-36 | TRANSISTOR 2SA1602 | |
| Q7 | 8-729-810-28 | TRANSISTOR 2SC4398 | |
| Q21 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q22 | 8-729-232-71 | TRANSISTOR 2SK208GR3 | |
| Q23 | 8-729-232-59 | TRANSISTOR 2SC4666B | |
| Q24 | 8-729-232-71 | TRANSISTOR 2SK208GR3 | |
| Q25 | 8-729-232-59 | TRANSISTOR 2SC4666B | |
| Q51 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q52 | 8-729-602-21 | TRANSISTOR 2SC4154-F | |
| Q53 | 8-729-810-28 | TRANSISTOR 2SC4398 | |
| | | < RESISTOR > | |
| R1 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R2 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R3 | 1-216-109-00 | METAL CHIP 330K 5% 1/10W | |
| R4 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R5 | 1-216-109-00 | METAL CHIP 330K 5% 1/10W | (G, IT) |
| R6 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | (G, IT) |
| R7 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R8 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R9 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R10 | 1-216-097-00 | METAL CHIP 100K 5% 1/10W | |
| R11 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R12 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R13 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R14 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R15 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R16 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | (AEP, UK) |
| R21 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R22 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R23 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R24 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R25 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R26 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R27 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R28 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R29 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R30 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | |
| R31 | 1-216-043-00 | METAL CHIP 560 5% 1/10W | |
| R32 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R33 | 1-216-035-00 | METAL CHIP 270 5% 1/10W | |
| R34 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R35 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R36 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R37 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R38 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R39 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | |
| R40 | 1-216-043-00 | METAL CHIP 560 5% 1/10W | |
| R41 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R42 | 1-216-035-00 | METAL CHIP 270 5% 1/10W | |
| R43 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R44 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R45 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R46 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R51 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R52 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R53 | 1-216-085-00 | METAL CHIP 33K 5% 1/10W | |
| R54 | 1-216-071-00 | METAL CHIP 8.2K 5% 1/10W | |

**TCB011**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R55 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W<br>(AEP, UK) |
| R56 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W<br>(G, IT) |
| R57 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R58 | 1-216-066-00 | METAL CHIP | 5.1K | 5% | 1/10W |
| R59 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W |
| R60 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W |
| R61 | 1-216-115-00 | METAL CHIP | 560K | 5% | 1/10W |
| R62 | 1-216-115-00 | METAL CHIP | 560K | 5% | 1/10W |
| R63 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W |
| R64 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W |
| R65 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R66 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R67 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R68 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R69 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R70 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R71 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R72 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R73 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R74 | 1-216-013-00 | METAL CHIP | 33 | 5% | 1/10W |
| R75 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R79 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W<br>(AEP, UK) |
| R79 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W<br>(G, IT) |

< VARIABLE RESISTOR >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| RV51 | 1-238-601-11 | RES, ADJ, CARBON 22K | |
| RV52 | 1-238-601-11 | RES, ADJ, CARBON 22K | |

< CONNECTOR >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| TP51 | * 1-564-336-00 | PIN, CONNECTOR 2P | (AEP, UK) |
| TP51 | * 1-568-449-11 | HOUSING, CONNECTOR (PC BOARD) 3P | (G, IT) |

< CRYSTAL >

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| X21 | 1-577-126-11 | VIBRATOR, CRYSTAL | |
| X51 | 1-577-075-11 | OSCILLATOR, CERAMIC 456kHz | |

**************************************************************

MISCELLANEOUS
*************

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 5 | 1-590-907-11 | WIRE, FLAT TYPE (20 CORE) | |
| 6 | 1-590-908-11 | WIRE, FLAT TYPE (20 CORE) | |
| 52 | 1-590-906-11 | WIRE, FLAT TYPE (19 CORE) | |
| 59 | 1-690-035-11 | WIRE, FLAT TYPE (19 CORE) | |
| 120 | 1-590-530-11 | WIRE, FLAT TYPE | |
| 156 | ⚠ 8-848-144-11 | DEVICE, OPTICAL KSS-240A | |
| 157 | 1-575-001-11 | WIRE, FLAT TYPE (12 CORE) | |
| F901 | ⚠ 1-532-078-00 | FUSE, TIME-LAG T1A | |
| M101 | X-4917-523-3 | MOTOR ASSY (SPINDLE) | |
| M102 | X-4917-504-1 | MOTOR ASSY (SLED) | |
| M291 | A-4608-362-A | MOTOR (L) ASSY | |
| T1 | ⚠ 1-450-412-11 | TRANSFORMER, POWER | |

**************************************************************

## HARDWARE LIST

| | | |
|---|---|---|
| # 1 | 7-621-255-25 | SCREW +PTT 2X4 (S) |
| # 2 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S |
| # 3 | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S |
| # 4 | 7-682-547-04 | SCREW +BVTT 3X6 (S) |
| # 5 | 7-685-650-79 | SCREW +BVTP 3X16 TYPE2 IT-3 |
| # 6 | 7-685-659-79 | SCREW +BVTP 4X8 TYPE2 IT-3 |
| # 7 | 7-685-234-19 | SCREW +KTP 2.6X8 TYPE2NON-SLIT |
| # 8 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S |
| # 9 | 7-621-775-10 | SCREW +B 2.6X4 |
| #10 | 7-624-105-04 | STOP RING 2.3, TYPE -E |
| #11 | 7-685-134-19 | SCREW +BTP 2.6X8 TYPE2 N-S |
| #12 | 7-621-255-15 | SCREW +P 2X3 |
| #13 | 7-682-947-01 | SCREW +PSW 3X6 (FORMER TYPE) |
| #14 | 7-682-547-09 | SCREW +B 3X6 (FORMER TYPE) |
| #15 | 7-685-872-01 | SCREW +BVTT 3X8 |

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**Sony Corporation**
**Audio Group**

**9-956-341-11**

**English**
**91F1858-1**
**Printed in Japan**
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**Published by Customer Relations and Service Group**

# TC-H1600

# SERVICE MANUAL

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*

This set is the deck section in MHC-H1600, FH-E636CD.

| | | |
|---|---|---|
| Model Name Using Similar Mechanism | TC-WR520/WR520S | |
| Tape Transport Mechanism Type | DECK A | TCM-190RA12A |
| | DECK B | TCM-190RB22A |

## SPECIFICATIONS

### Cassette Deck Section

| | |
|---|---|
| Recording system | 4-track 2-channel stereo |
| Frequency response | (DOLBY NR OFF)<br>40 — 13,000 Hz (±3 dB) using TYPE I cassette (Sony HF-S)<br>40 — 14,000 Hz (±3 dB) using TYPE II cassette |
| Wow and flutter | 0.1% WRMS ±0.3% (DIN) |

Design and specifications subject to change without notice.

**Note**
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MICROFILM

# STEREO CASSETTE DECK

SONY®

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### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

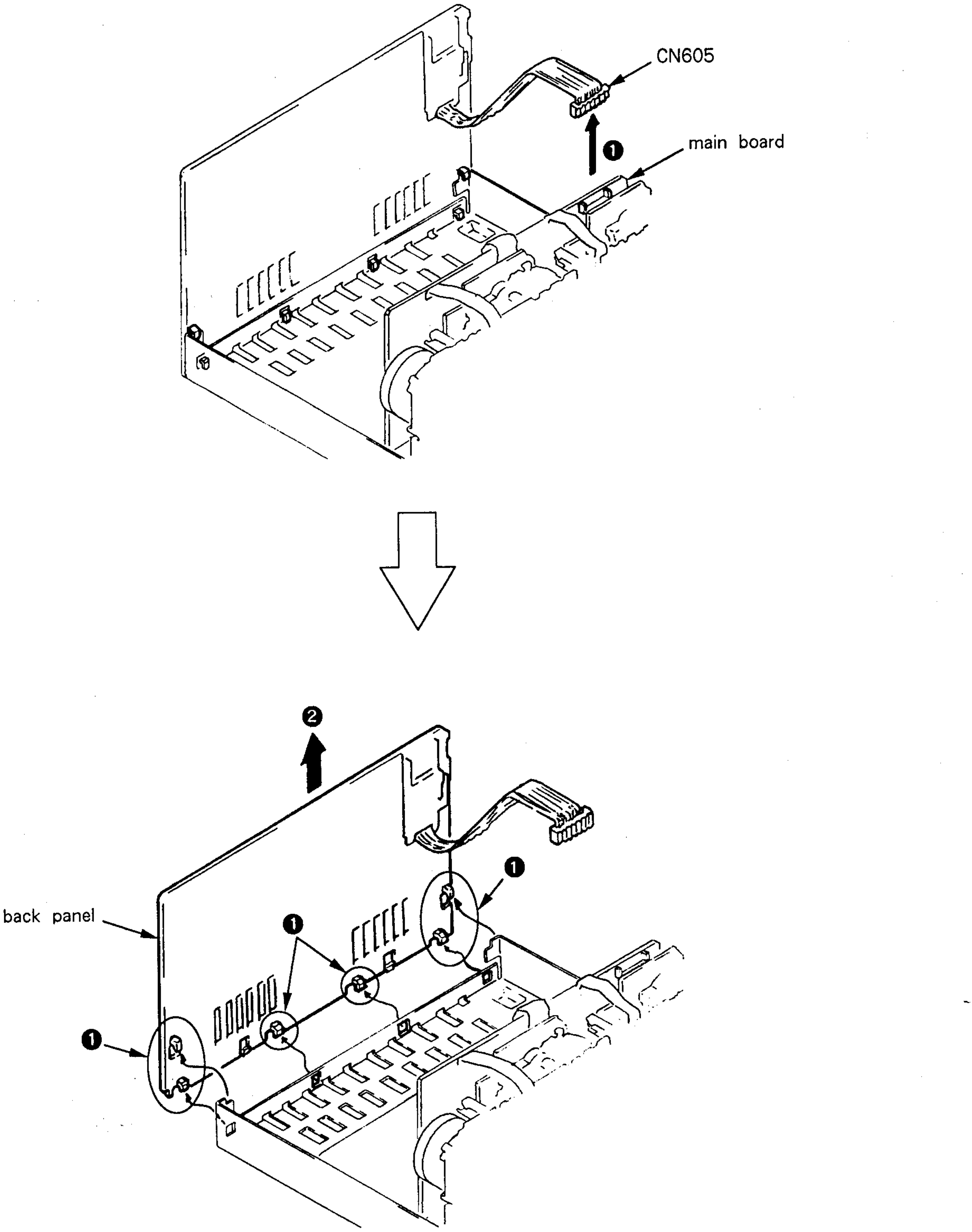
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

# SECTION 2
# DISASSEMBLY

## 2-1. BACK PANEL REMOVAL

**Note :** Follow the disassembly procedure in the numerical order given.

① Remove the connector of the main board (CN605).
② Release the latches while lifting up back panel.


CN605
main board
❶
❷
back panel
❶
❶
❶

# SECTION 3
# ADJUSTMENTS

## 3-1. MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :

| | |
|---|---|
| record／playback head | pinch roller |
| erase head | rubber belts |
| capstan | idler |

2. Demagnetize the record／playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the perts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

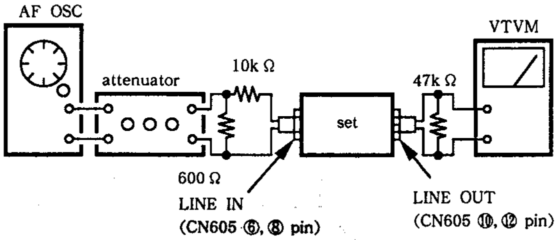
| Torgue | Torque meter | Meter reading |
|---|---|---|
| FWD | CQ-102C | 35 to 60g・cm<br>(0.49 to 0.83 oz・inch) |
| FWD<br>Back tension | CQ-102C | 2 to 6g・cm<br>(0.028 to 0.08 oz・inch) |
| REV | CQ-102RC | 35 to 60g・cm<br>(0.49 to 0.83 oz・inch) |
| REV<br>Back tension | CQ-102RC | 2 to 6g・cm<br>(0.028 to 0.08 oz・inch) |
| FF, REW | CQ-201B | 70 to 110g・cm<br>(0.98 to 1.52 oz・inch) |

## 3-2. ELECTRICAL ADJUSTMENT

**Note :** The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording.
The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
  DOLBY NR switch : OFF
  DIRECTION mode switch : ⇄
- Standard Record :
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

**—Record Mode—**



Standard Input Level

| | |
|---|---|
| input terminal | LINE IN |
| source impedance | 10kΩ |
| input level | 0.25V (−10dB) |

Standard Output Level

| | |
|---|---|
| output terminal | LINE OUT |
| load impedance | 47kΩ |
| output level | 0.35V (−7dB) |

Test tape

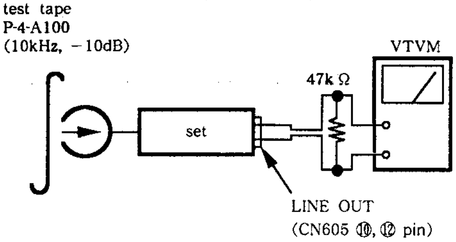
| Type | Signal | Used for |
|---|---|---|
| P-4-A100 | 10kHz, −10dB | Azimuth Adjustment |
| P-4-L300 | 315Hz, 0dB | PB Level Adjustment |
| WS-48B | 3kHz, 0dB | Tape Speed Adjustment |

### Record／Playback Head Azimuth Adjustment

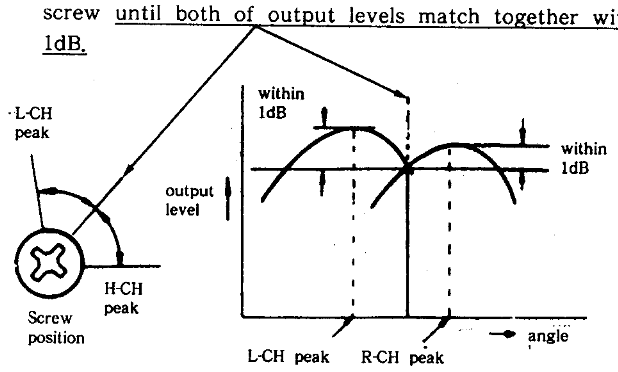
**DECK A** **DECK B**

**Procedure :**

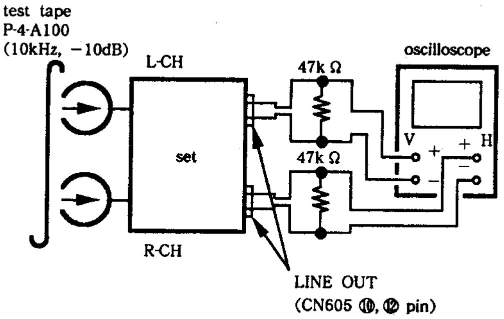
1. Mode : FWD playback

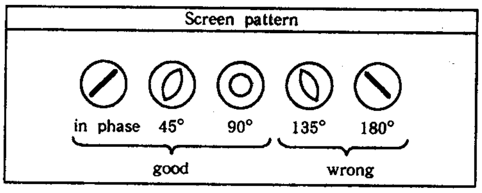


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.


L-CH peak
within 1dB
output level
within 1dB
H-CH peak
Screw position
L-CH peak
R-CH peak
angle

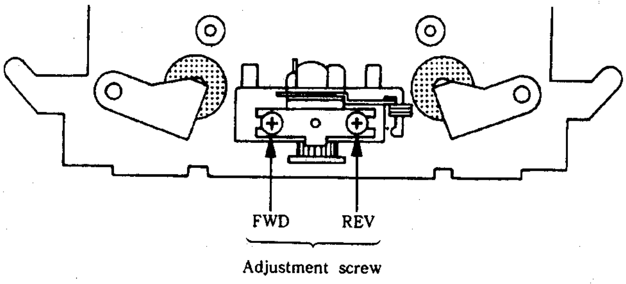
3. Phase Check
   Mode : playback


test tape
P-4-A100
(10kHz, −10dB)
L-CH
47kΩ
oscilloscope
set
47kΩ
V
+
+
H
−
R-CH
LINE OUT
(CN605 ⑩, ⑫ pin)


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

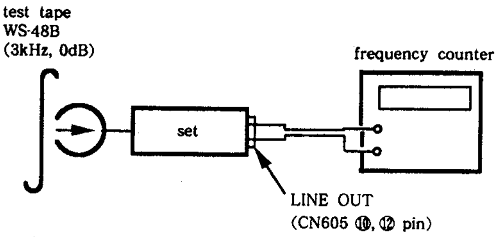
4. Set in the REV mode and repeat the step 1-3.
5. After the adjustment, lock the screws with locking compound.

**Adjustment Location** : Record/Playback head


FWD
REV
Adjustment screw

## Tape Speed Adjustment DECK A DECK B

**Procedure :**
Mode : playback


test tape
WS-48B
(3kHz, 0dB)
frequency counter
set
LINE OUT
(CN605 ⑩, ⑫ pin)

Perform high speed adjustment before mormal speed adjustment

**(high speed adjustment)**

1. Set to FWD playback mode.
2. Keep on pressing the HIGH SPEED DUBBING switch.
3. Adjust the RV72A (DECK A), RV72B (DECK B) so that the frequency counter reading becomes 6,000±30Hz.
4. Set in the REV mode and repeat the step 1-3.

**(normal speed adjustment)**

1. Set to FWD playback mode.
2. Keep on pressing the NORMAL SPEED DUBBING switch.
3. Adjust the RV71A (DECK A), RV71B (DECK B) so that the frequency counter reading becomes 3,000±15Hz.
4. Set in the REV mode and repeat the step 1-3.

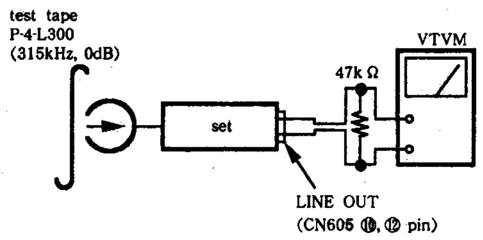
Frequency difference between the beginning and the end of the tape, should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1%.

**Adjustment Location** : MD (A), MD (B) board

### Playback Level Adjustment DECK A DECK B

**Procedure :**

Mode : playback


test tape
P-4-L300
(315kHz, 0dB)
VTVM
47k Ω
set
LINE OUT
(CN605 ⑩, ⑫ pin)

Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustmeny limits below.

**Ajustment Limits :**

LINE OUT level : −7±1dB (0.39−0.31dB)

Level difference between channels : less than 1dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

**Adjustment Location :** MD (A), MD (B) board

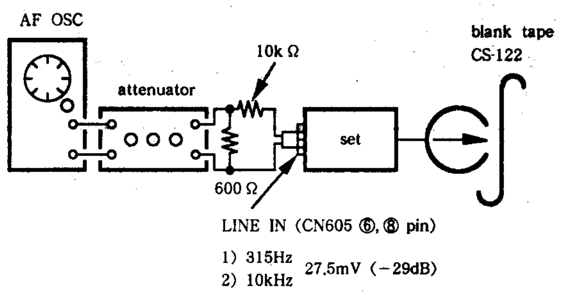
### Record Bias Adjustment DECK A DECK B

**Setting :**

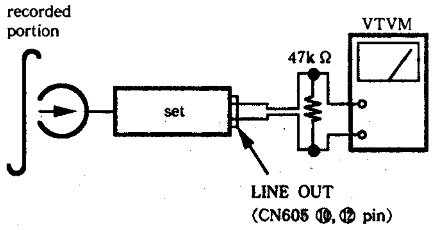
REC LEVEL control : Standard Record (See page 5).

**Procedure :**

1. Mode : record


AF OSC
attenuator
10k Ω
600 Ω
set
blank tape
CS-122
LINE IN (CN605 ⑥, ⑧ pin)
1) 315Hz
2) 10kHz
27.5mV (−29dB)

2. Mode : playback


recorded
portion
VTVM
47k Ω
set
LINE OUT
(CN605 ⑩, ⑫ pin)

Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0±0.5dB relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

**Adjustment Location :** MD (B) board

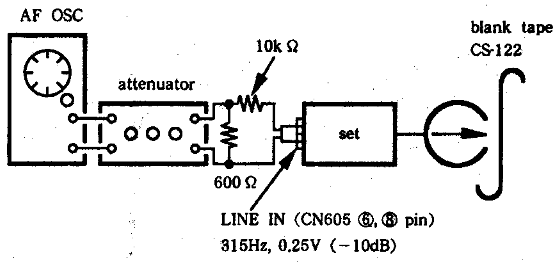
### Record Level Adjustment DECK A DECK B

**Setting :**

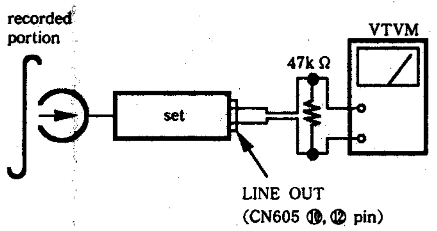
REC LEVEL control : Standard Record (See page 5).

**Procedure :**

1. Mode : record


AF OSC
attenuator
10k Ω
600 Ω
set
blank tape
CS-122
LINE IN (CN605 ⑥, ⑧ pin)
315Hz, 0.25V (−10dB)

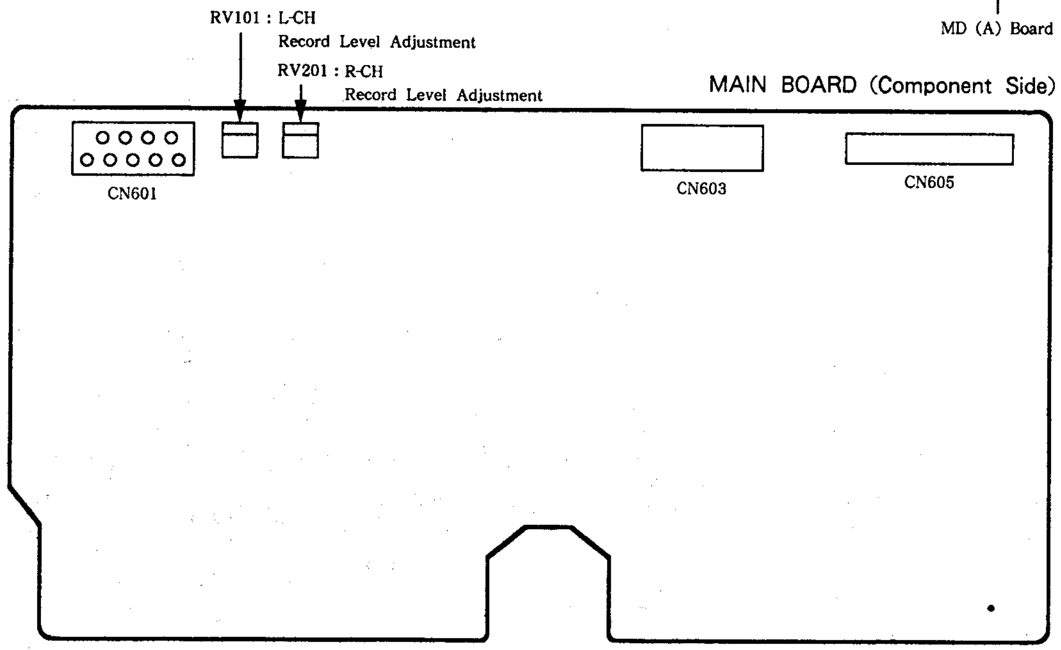
2. Mode : playback


recorded
portion
VTVM
47k Ω
set
LINE OUT
(CN605 ⑩, ⑫ pin)

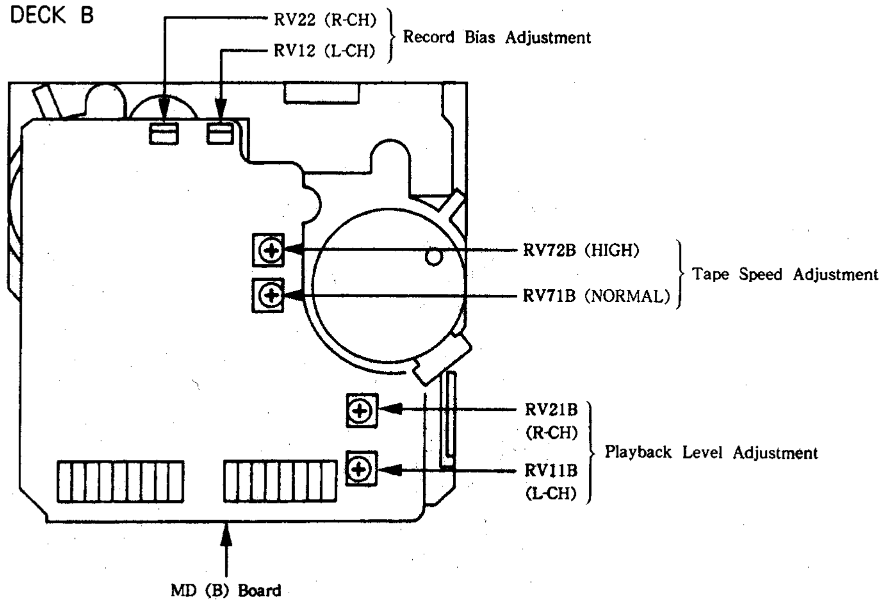
3. Playback the signal recorded in step 1.
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-3.

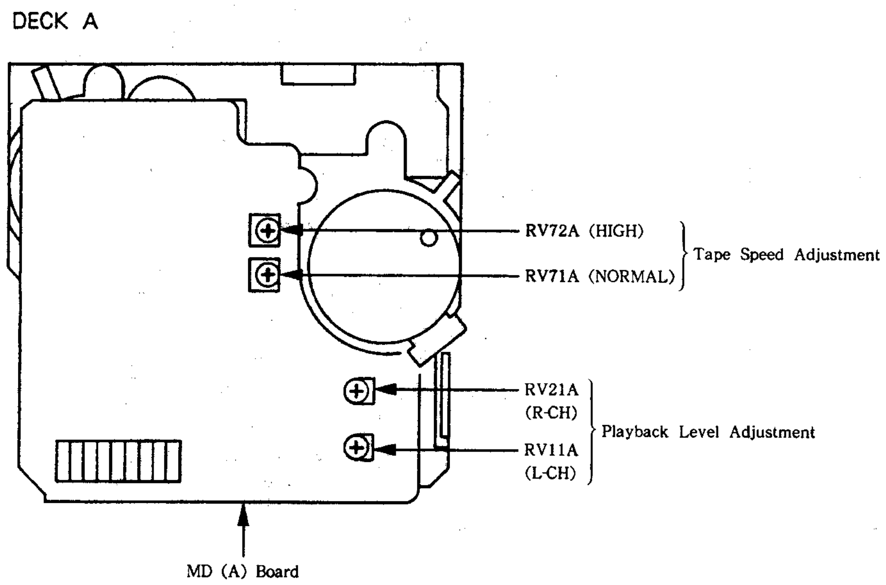
**Ajustment Limits :** −7dB±0.5dB (0.33−0.36V)

**Adjustment Location :** MAIN board


RV101 : L-CH
Record Level Adjustment
RV201 : R-CH
Record Level Adjustment
MAIN BOARD (Component Side)
CN601
CN603
CN605

**Adjustment Location :** MD (B) board


DECK B
RV22 (R-CH)
RV12 (L-CH)
Record Bias Adjustment
RV72B (HIGH)
RV71B (NORMAL)
Tape Speed Adjustment
RV21B
(R-CH)
RV11B
(L-CH)
Playback Level Adjustment
MD (B) Board


DECK A
RV72A (HIGH)
RV71A (NORMAL)
Tape Speed Adjustment
RV21A
(R-CH)
RV11A
(L-CH)
Playback Level Adjustment
MD (A) Board

## 4-1. CIRCUI

.) Tape Speed Adjustment

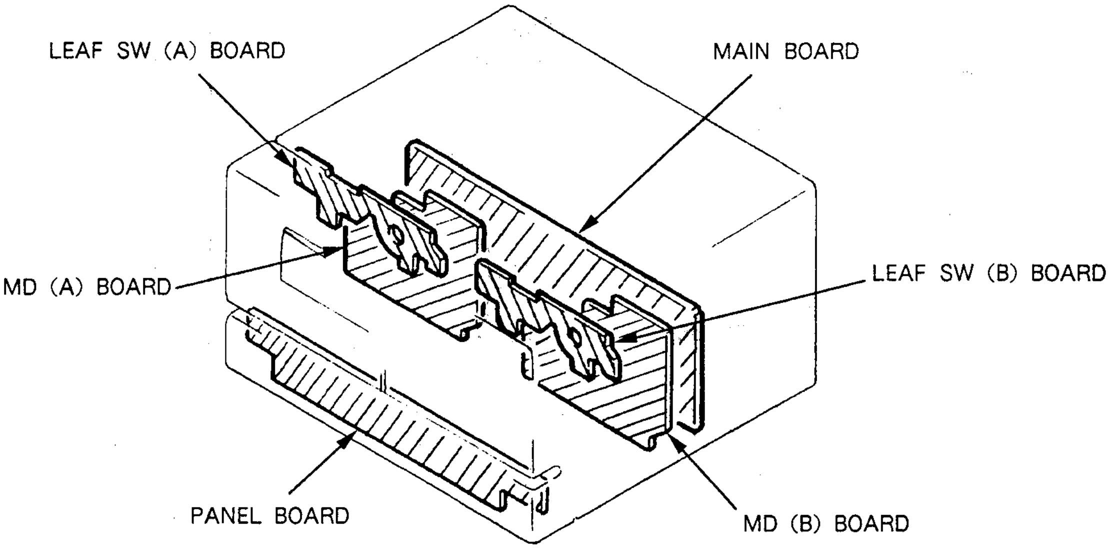
k Level Adjustment

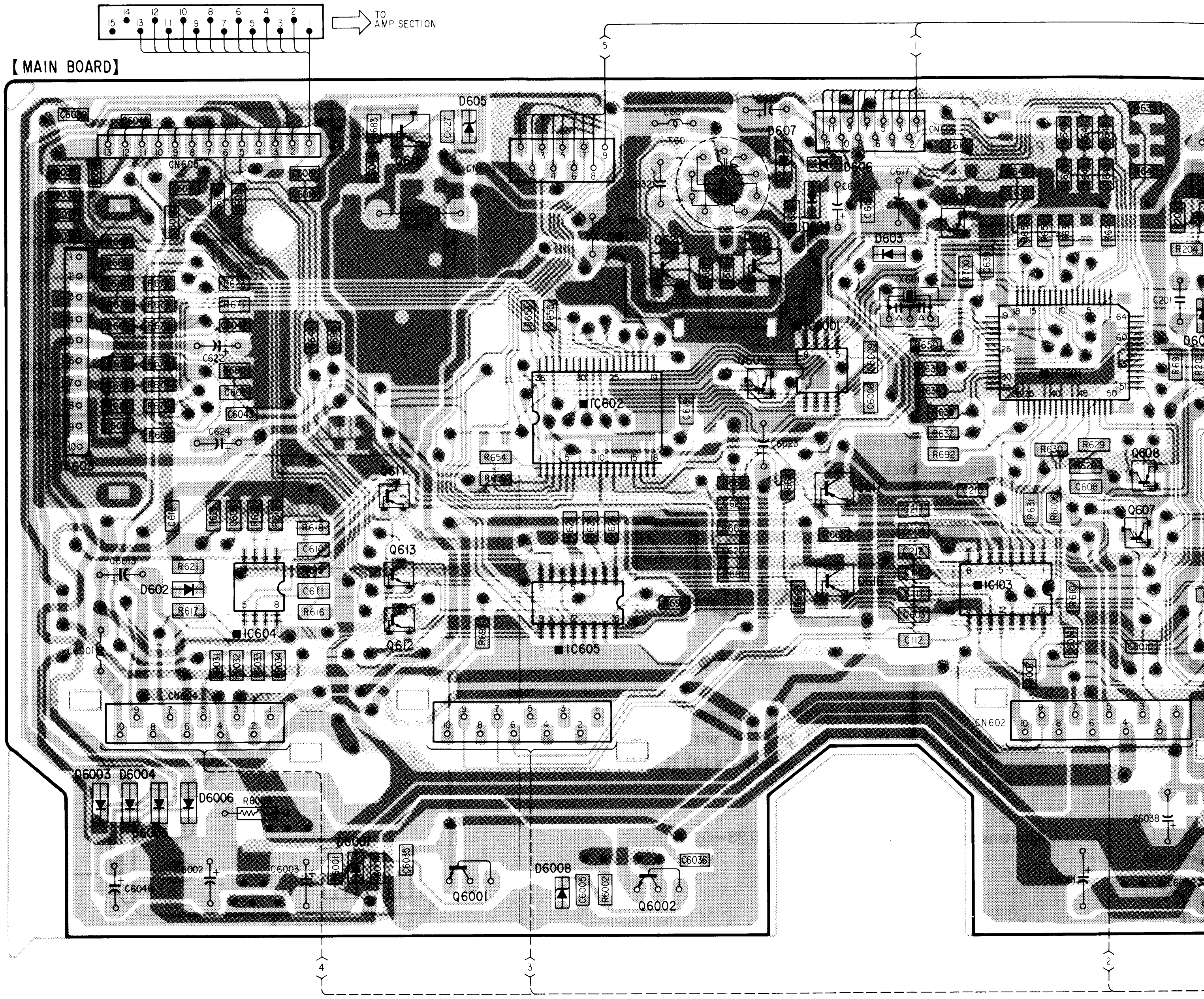
) Tape Speed Adjustment

Level Adjustment

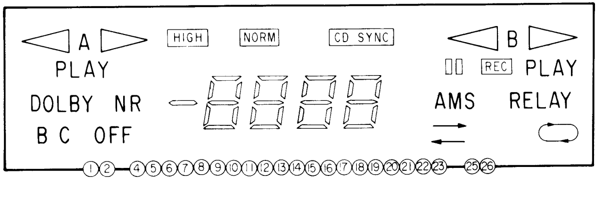
# SECTION 4
# DIAGRAMS

## 4-1. CIRCUIT BOARDS LOCATION

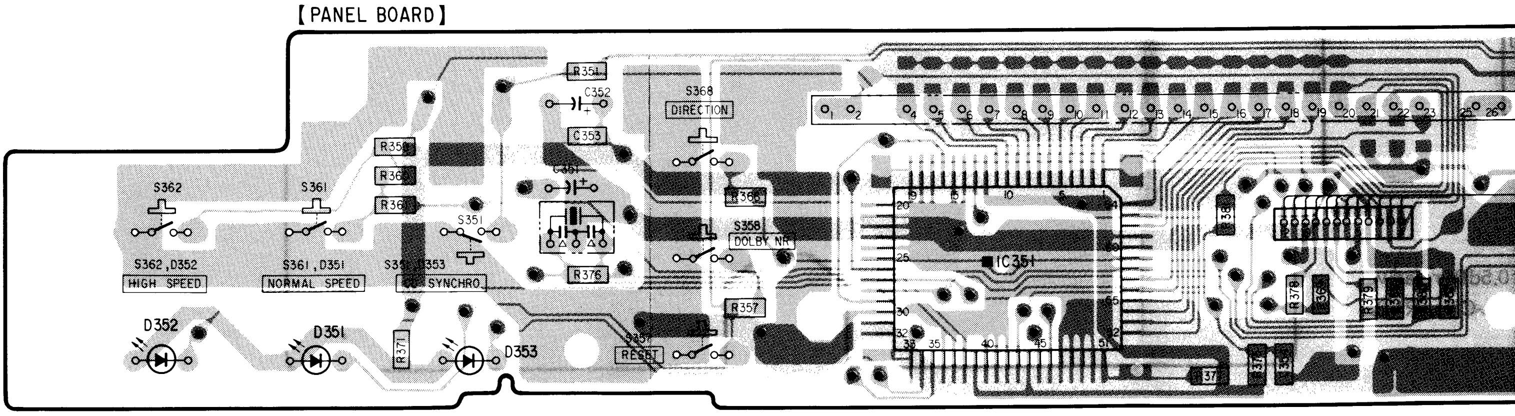

LEAF SW (A) BOARD
MAIN BOARD
MD (A) BOARD
LEAF SW (B) BOARD
PANEL BOARD
MD (B) BOARD


TO AMP SECTION
【MAIN BOARD】
CN605
CN603
CN604
CN607
CN602
IC602
IC603
IC604
IC605
IC6001
IC601
IC103
T601
X601
D602
D603
D604
D605
D606
D607
D6003
D6004
D6005
D6006
D6007
D6008
Q6001
Q6002
Q6005
Q607
Q608
Q611
Q612
Q613
Q616
Q617
Q618
Q619
Q620
R6003
C6046
C6002
C6003
C6035
C6036
C6038
C6001
C622
C624
C6015
C6001
C201
R204
5
1
4
3
2

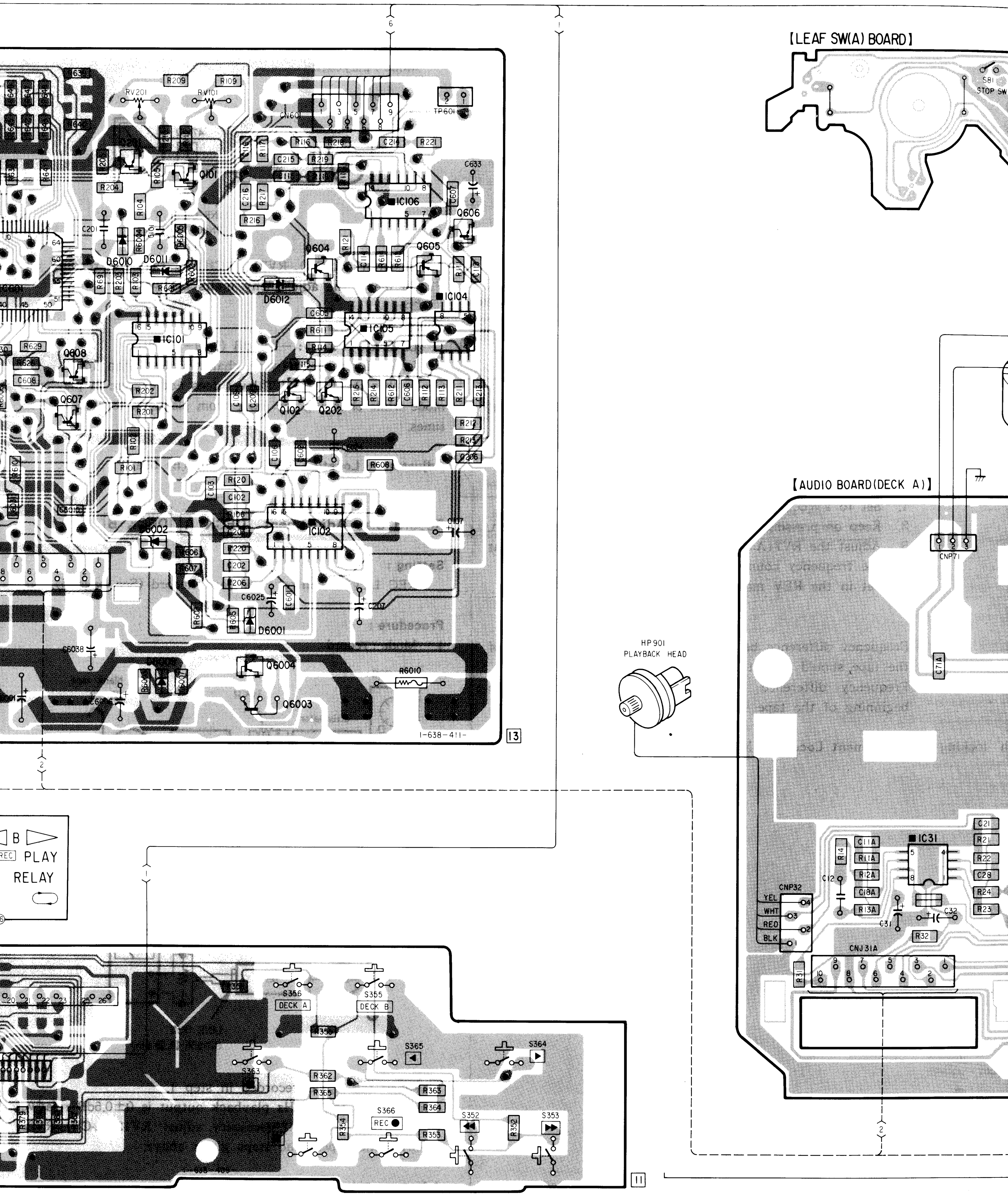
FL351
COUNTER DISPLAY


A
HIGH
NORM
CD SYNC
B
PLAY
REC
PLAY
DOLBY NR
AMS
RELAY
B C OFF
①②④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉕㉖

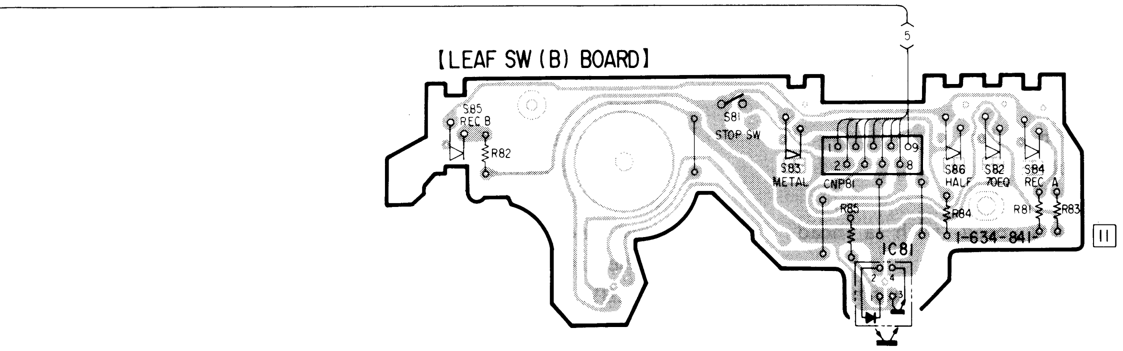
【PANEL BOARD】


S362
S361
S351
S368
DIRECTION
S358
DOLBY NR
S357
RESET
S362, D352
HIGH SPEED
S361, D351
NORMAL SPEED
S351, D353
SYNCHRO
D352
D351
D353
IC351
R351
C352
C353
C351
R376
R357
R358
R360
R361
R371
R366

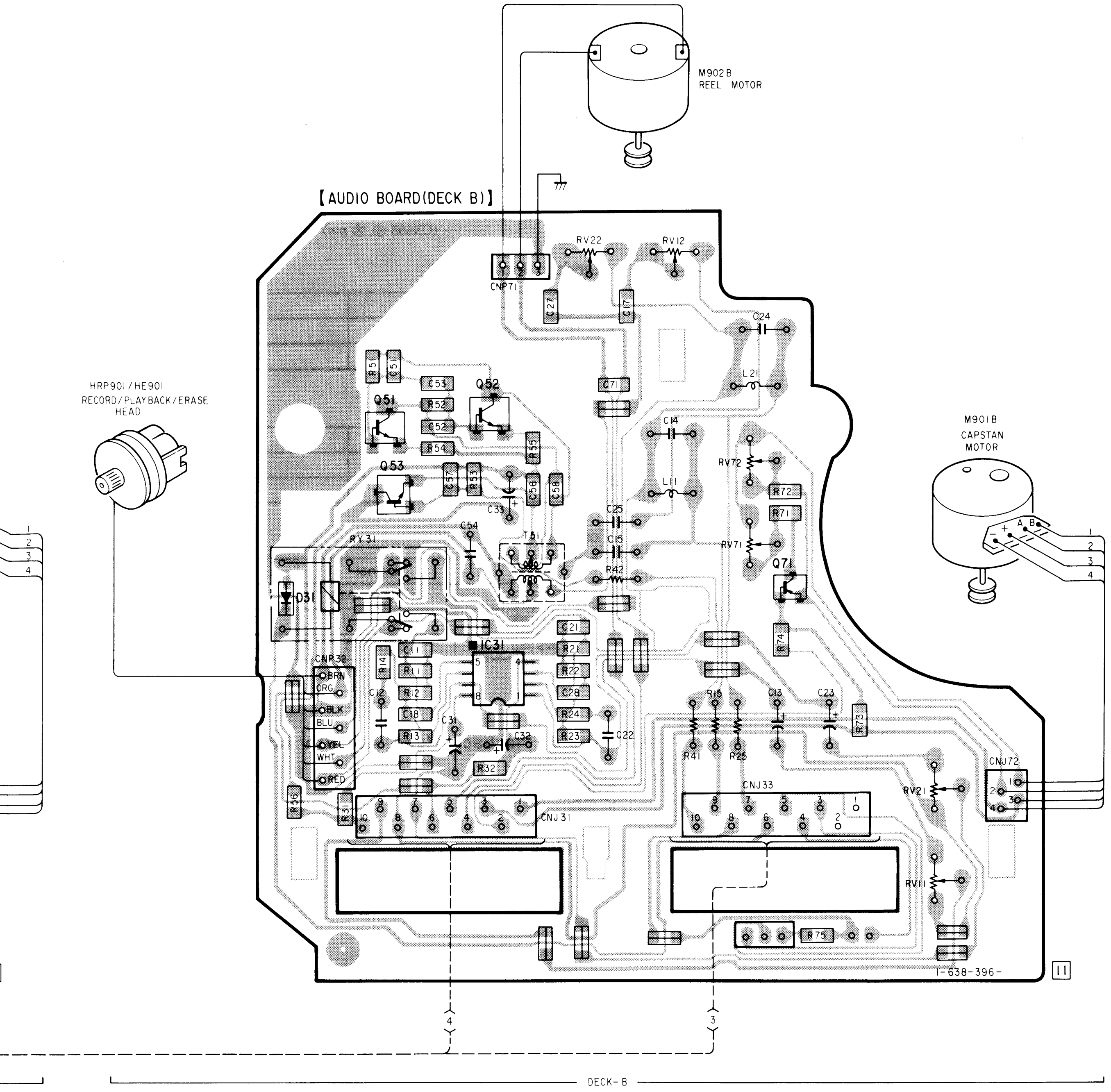
02


【LEAF SW(A) BOARD】
S81
STOP SW
【AUDIO BOARD(DECK A)】
CNP71
HP901
PLAYBACK HEAD
CNP32
YEL
WHT
RED
BLK
IC31
CNJ31A
CN601
TP601
IC101
IC102
IC104
IC105
IC106
Q101
Q102
Q202
Q604
Q605
Q606
Q607
Q608
Q6003
Q6004
D6001
D6002
D6010
D6011
D6012
RV101
RV201
R6010
1-638-411-
13
B
REC
PLAY
RELAY
S352
S353
S355
DECK B
S356
DECK A
S363
S364
S365
S366
REC ●
11

**[LEAF SW (B) BOARD]**


5
S85
REC B
R82
S81
STOP SW
S83
METAL
CNP81
S86
HALF
S82
70EQ
S84
REC A
R85
R84
R81
R83
1-634-841-
IC81
11

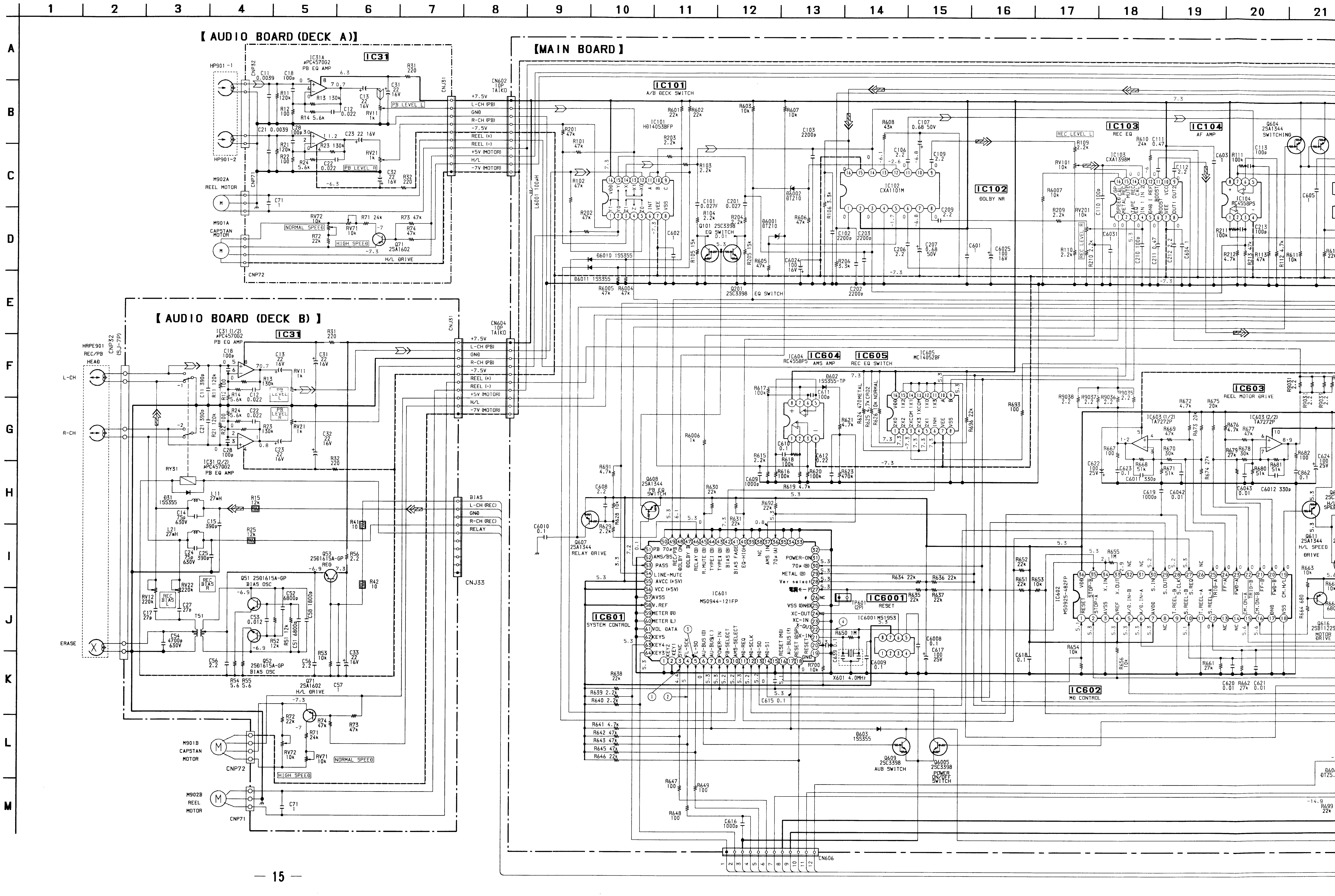
**[AUDIO BOARD (DECK B)]**


M902B
REEL MOTOR
HRP901/HE901
RECORD/PLAYBACK/ERASE
HEAD
M901B
CAPSTAN
MOTOR
CNP71
RV22
RV12
C27
C17
C24
R51
C51
C53
Q52
C71
L21
Q51
R52
C52
C14
R54
R55
RV72
Q53
C57
R53
C56
C58
L11
C33
R72
C25
R71
C54
T51
C15
RV71
RY31
R42
Q71
D31
C21
IC31
R21
R74
CNP32
BRN
ORG
BLK
BLU
YEL
WHT
RED
C11
R14
R11
R22
C12
R12
C28
R15
C13
C23
C18
R24
C31
C22
R73
R13
C32
R23
R41
R25
R32
CNJ33
CNJ72
RV21
R56
R31
CNJ31
RV11
R75
1-638-396-
11
4
3
1
2
3
4
A B
DECK-B

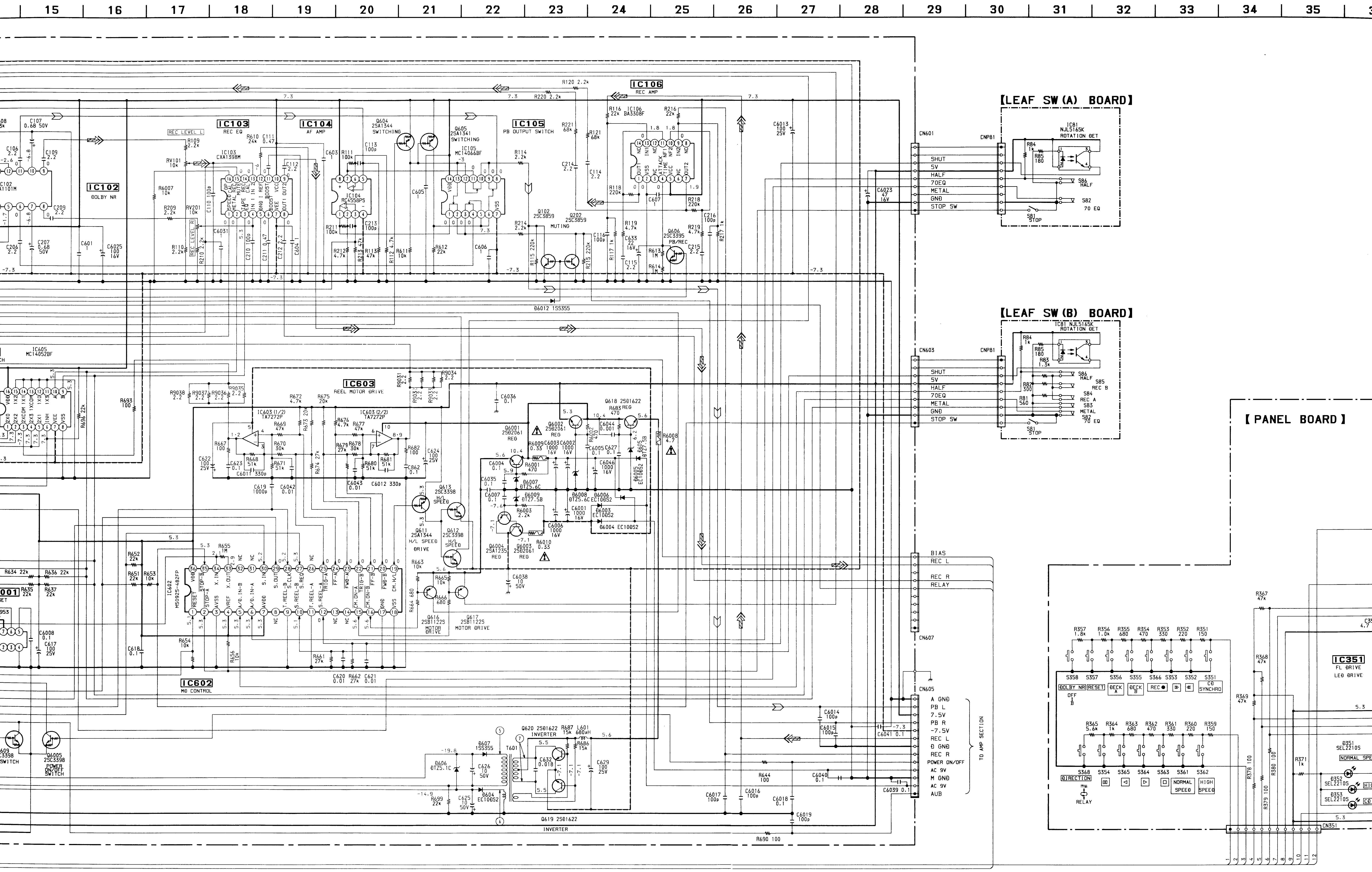
## 4-4. SCHEMATIC DIAGRAM —US, Canadian, E Model—

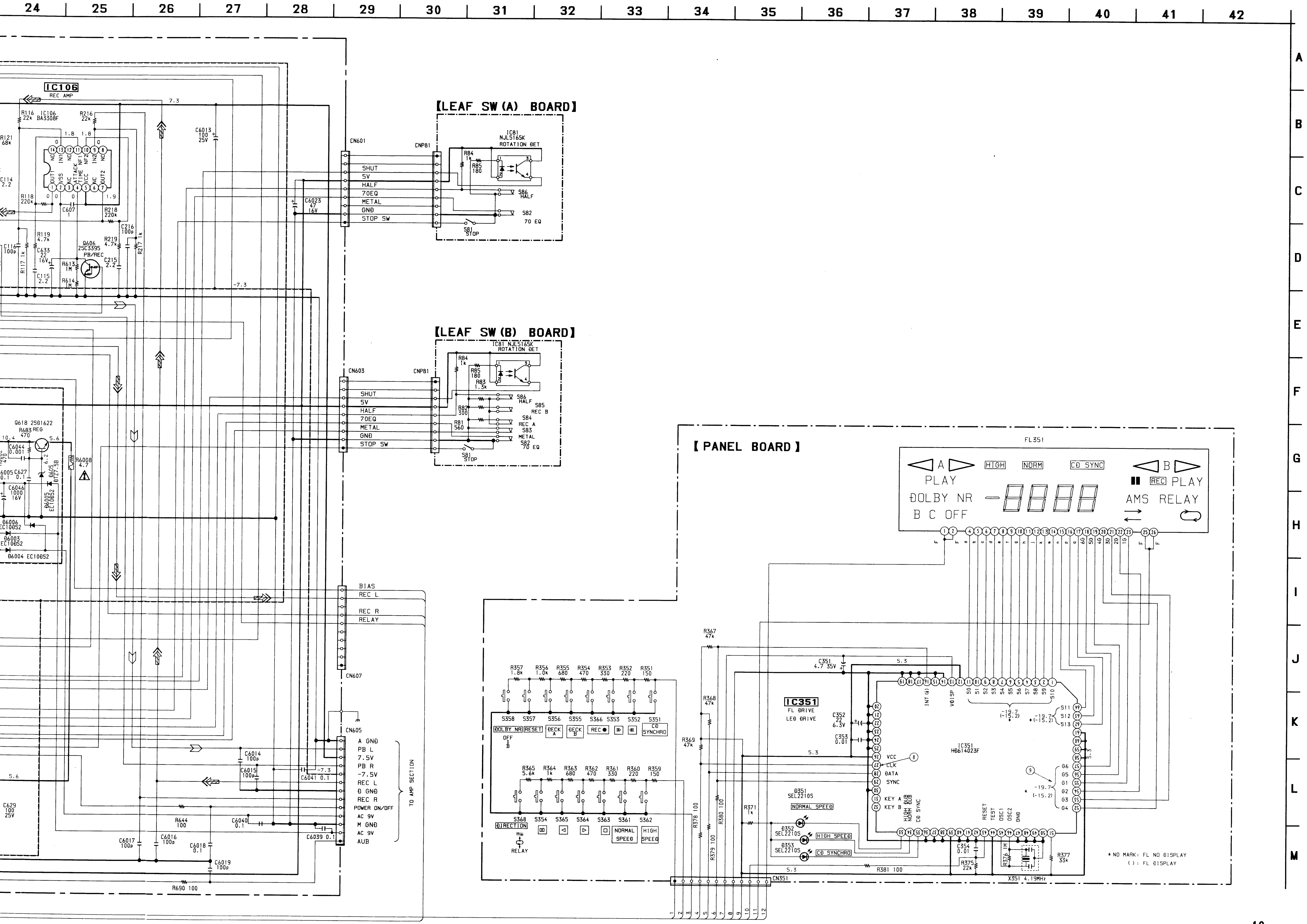
• Refer to page 30 for Waveforms.

• Refer to page 31 for IC Block Diagrams.



【AUDIO BOARD (DECK A)】
【AUDIO BOARD (DECK B)】
【MAIN BOARD】
IC31
IC31A μPC4570G2 PB EQ AMP
IC31 (1/2) μPC4570G2 PB EQ AMP
IC31 (2/2) μPC4570G2 PB EQ AMP
HP901-1
HP901-2
M902A REEL MOTOR
M901A CAPSTAN MOTOR
HRPE901 REC/PB HEAD
L-CH
R-CH
ERASE
RY31
T51
Q51 2SD1615A-GP BIAS OSC
Q52 2SD1615A-GP BIAS OSC
Q53 2SD1615A-GP REG
Q71 2SA1602 H/L DRIVE
M901B CAPSTAN MOTOR
M902B REEL MOTOR
CNP72
CNP71
CNP32
CNJ31
CNJ33
CN602 10P TAIKO
CN604 10P TAIKO
NORMAL SPEED
HIGH SPEED
PB LEVEL L
PB LEVEL R
REC BIAS L
REC BIAS R
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V (MOTOR)
H/L
-7V (MOTOR)
BIAS
L-CH (REC)
R-CH (REC)
RELAY
IC101 A/B DECK SWITCH
IC101 HD14053BFP
IC102 CXA1101M
IC102 DOLBY NR
IC103 REC EQ
IC103 CXA1398M
IC104 AF AMP
IC104 RC4558PS
Q604 2SA1344 SWITCHING
Q101 2SC3398 EQ SWITCH
Q201 2SC3398 EQ SWITCH
IC604 RC4558PS AMS AMP
IC605 REC EQ SWITCH
IC605 MC14052BF
IC603 REEL MOTOR DRIVE
IC603 (1/2) TA7272P
IC603 (2/2) TA7272P
Q608 2SA1344 PB EQ SWITCH
Q607 2SA1344 RELAY DRIVE
IC601 SYSTEM CONTROL
IC601 M50944-121FP
IC6001 RESET
IC6001 M51953
X601 4.0MHz
IC602 MD CONTROL
IC602 M50925-482FP
Q611 2SA1344 H/L SPEED DRIVE
Q616 2SB1122S MOTOR DRIVE
Q609 2SC3398 AUB SWITCH
Q6005 2SC3398 POWER ON/OFF SWITCH
D603 1SS355
CN606
L6001 100μH
REC LEVEL L
REC LEVEL R


15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
IC102
DOLBY NR
IC103
REC EQ
IC103 CXA1398M
REC LEVEL L
IC104
AF AMP
IC104 RC4558PS
Q604 2SA1344 SWITCHING
Q605 2SA1341 SWITCHING
IC105 MC14066BF
IC105
PB OUTPUT SWITCH
Q102 2SC3859
Q202 2SC3859
MUTING
IC106
REC AMP
IC106 BA3308F
Q606 2SC3395 PB/REC
D6012 1SS355
IC605 MC14052BF
IC603
REEL MOTOR DRIVE
IC603 (1/2) TA7272P
IC603 (2/2) TA7272P
Q618 2SD1622 REG
Q6001 2SD2061 REG
Q6002 2SD2061 REG
Q6004 2SA1235 REG
Q6003 2SD2061 REG
Q613 2SC3398 H/L SPEED
Q611 2SA1344 H/L SPEED DRIVE
Q612 2SC3398 H/L SPEED
Q616 2SB1122S MOTOR DRIVE
Q617 2SB1122S MOTOR DRIVE
IC602 M50925-482FP
IC602
MD CONTROL
Q609 2SC3398 SWITCH
Q6005 2SC3398 POWER ON/OFF SWITCH
Q620 2SD1622 INVERTER
Q619 2SD1622
INVERTER
T601
D606 DTZ5.1C
D607 1SS355
D604 EC10QS2
CN601
CN603
CN605
CN607
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
BIAS
REC L
REC R
RELAY
A GND
PB L
7.5V
PB R
-7.5V
REC L
D GND
REC R
POWER ON/OFF
AC 9V
M GND
AC 9V
AUB
TO AMP SECTION
【LEAF SW (A) BOARD】
CNP81
IC81 NJL5165K ROTATION DET
S86 HALF
S82 70 EQ
S81 STOP
【LEAF SW (B) BOARD】
CNP81
IC81 NJL5165K ROTATION DET
S86 HALF
S85 REC B
S84 REC A
S83 METAL
S82 70 EQ
S81 STOP
【PANEL BOARD】
S358 DOLBY NR OFF B
S357 RESET
S356 DECK A
S355 DECK B
S366 REC●
S353 ▷▷
S352 ◁◁
S351 CD SYNCHRO
S368 DIRECTION
S354 ▯▯
S365 ◁
S364 ▷
S363 □
S361 NORMAL SPEED
S362 HIGH SPEED
RELAY
IC351
FL DRIVE
LED DRIVE
D351 SEL2210S
D352 SEL2210S
D353 SEL2210S
CN351


IC106
REC AMP
IC106 BA3308F
【LEAF SW (A) BOARD】
CN601
CNP81
IC81 NJL5165K ROTATION DET
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
S86 HALF
S82 70 EQ
S81 STOP
【LEAF SW (B) BOARD】
CN603
S85 REC B
S84 REC A
S83 METAL
S82 70 EQ
Q606 2SC3395 PB/REC
Q618 2SD1622 REG
CN607
BIAS
REC L
REC R
RELAY
CN605
A GND
PB L
7.5V
PB R
-7.5V
REC L
D GND
REC R
POWER ON/OFF
AC 9V
M GND
AC 9V
AUB
TO AMP SECTION
【PANEL BOARD】
FL351
A
HIGH
NORM
CD SYNC
B
PLAY
REC
DOLBY NR
AMS RELAY
B C OFF
IC351
FL DRIVE
LED DRIVE
IC351 HD614023F
VCC
CLK
DATA
SYNC
KEY A
KEY B
S358 DOLBY NR
S357 RESET
S356 DECK A
S355 DECK B
S366 REC●
S353
S352
S351 CD SYNCHRO
OFF B
S368 DIRECTION
S354
S365
S364
S363
S361 NORMAL SPEED
S362 HIGH SPEED
RELAY
D351 SEL2210S NORMAL SPEED
D352 SEL2210S HIGH SPEED
D353 SEL2210S CD SYNCHRO
X351 4.19MHz
CN351
* NO MARK: FL NO DISPLAY
( ): FL DISPLAY
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
A
B
C
D
E
F
G
H
I
J
K
L
M

Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ─▭─ : fusible resistor.

| **Note:**<br>The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | **Note:**<br>Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |
|---|---|

- ▬▬ : B+ Line
- ▬ ▬ ▬ : B− Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

  ⊳ : PB (DECK A)
  ⊳» : PB (DECK B)
  ⇨» : REC (DECK B)

Note on Printed Wiring Boards :

- ○— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.
- ☐ : Chip components extracted from the rear side.

## • SEMICONDUCTOR LOCATION

| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D31 | H−23 | Q51 | G−23 |
| D351 | K−3 | Q52 | G−24 |
| D352 | K−2 | Q53 | G−23 |
| D353 | K−4 | Q101 | B−10 |
| D601 | F−10 | Q102 | D−11 |
| D602 | E−2 | Q201 | B−10 |
| D603 | C−7 | Q202 | D−11 |
| D604 | B−7 | Q601 | F−10 |
| D605 | B−4 | Q602 | F−10 |
| D606 | B−7 | Q603 | F−11 |
| D607 | B−6 | Q604 | C−11 |
| D6003 | F−2 | Q605 | C−12 |
| D6004 | F−2 | Q606 | C−12 |
| D6005 | F−2 | Q607 | E−9 |
| D6006 | F−2 | Q608 | D−9 |
| D6007 | G−3 | Q609 | B−8 |
| D6008 | G−5 | Q611 | D−4 |
| D6009 | G−10 | Q612 | E−4 |
| D6010 | C−9 | Q613 | E−4 |
| D6011 | C−10 | Q616 | E−7 |
| D6012 | C−11 | | |
| | | Q617 | D−7 |
| | | Q618 | B−4 |
| IC101 | D−10 | Q619 | C−6 |
| IC102 | E−11 | Q620 | C−6 |
| IC103 | E−8 | Q6001 | G−4 |
| IC104 | D−12 | | |
| IC105 | D−12 | Q6002 | G−6 |
| | | Q6003 | G−11 |
| IC106 | C−12 | Q6004 | G−11 |
| IC351 | J−7 | Q6005 | C−6 |
| IC601 | C−8 | | |
| IC602 | D−5 | | |
| IC603 | C−1 | | |
| IC604 | E−3 | | |
| IC605 | E−5 | | |
| IC6001 | C−7 | | |

LEAF SW (A) BOARD

| Ref. No. | Location |
|---|---|
| IC81 | B−18 |

LEAF SW (B) BOARD

| Ref. No. | Location |
|---|---|
| IC81 | B−26 |

MD (A) BOARD

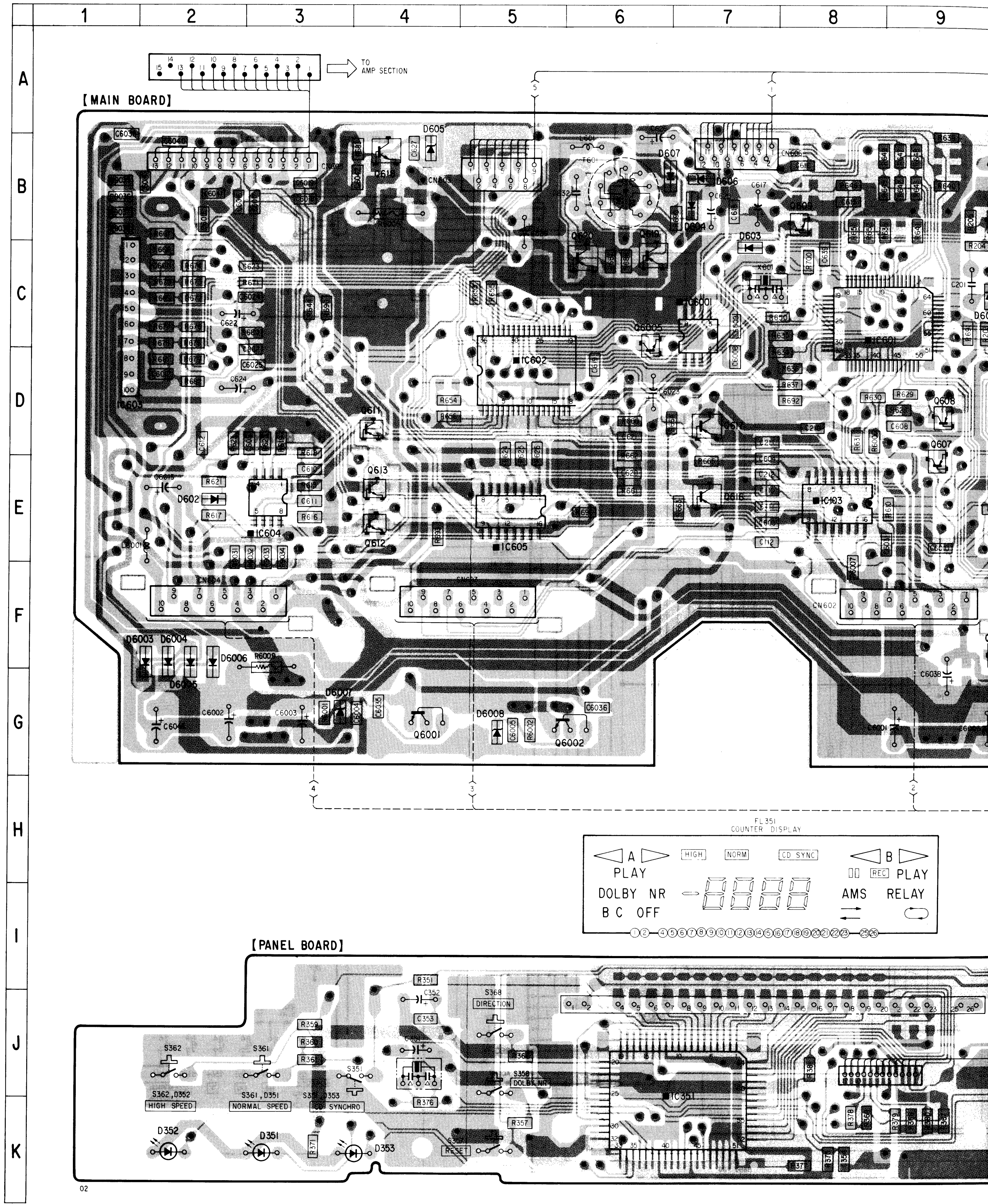
| Ref. No. | Location |
|---|---|
| IC31<br>Q71 | H−17<br>H−19 |

MD (B) BOARD

| Ref. No. | Location |
|---|---|
| IC31<br>Q71 | H−24<br>H−26 |

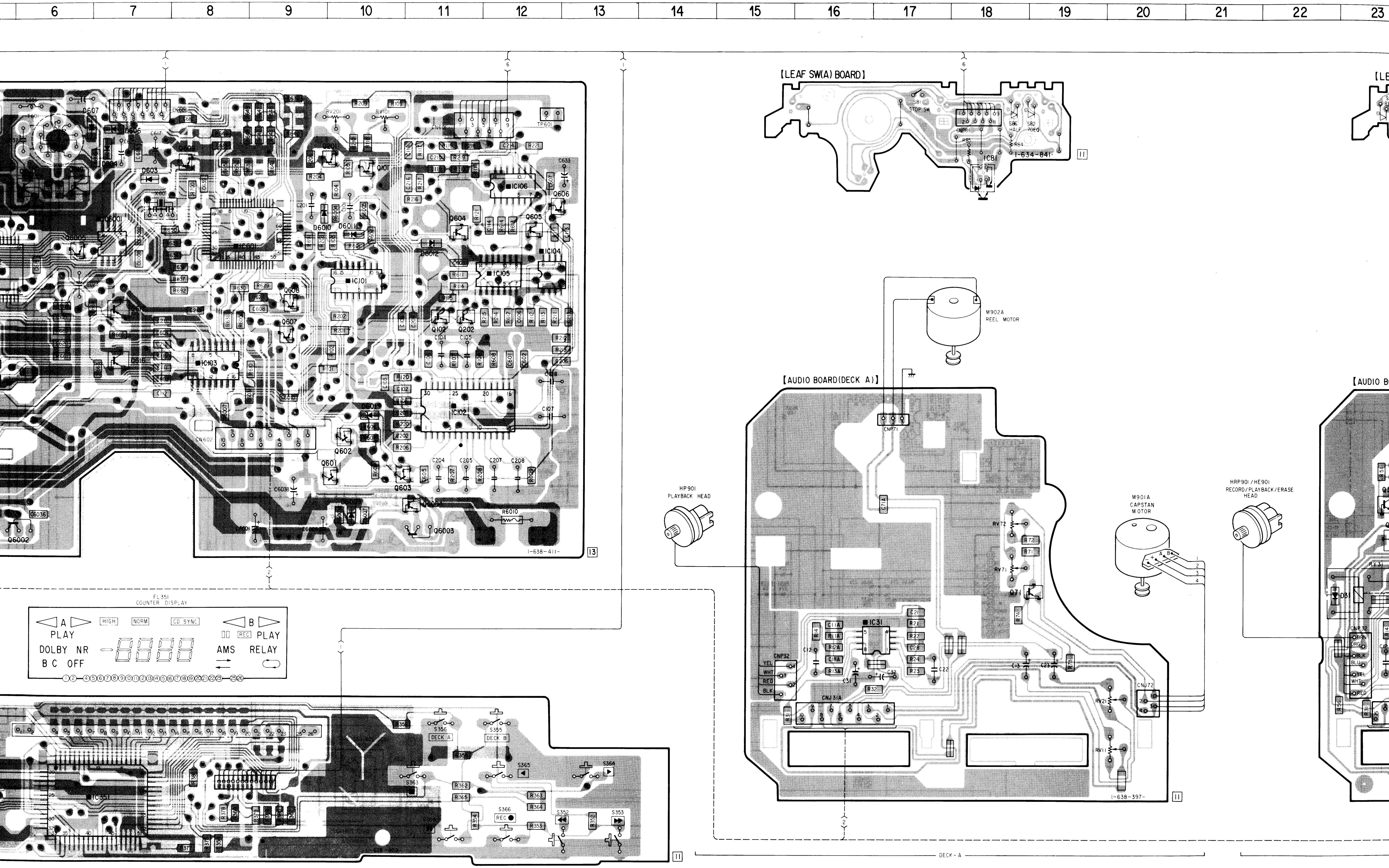
## 4-5. PRINTED WIRING BOARDS —AEP, UK, Germany, Australian Model—

• Refer to page 10 for Semiconductor Lead Layouts.



1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
TO AMP SECTION
[MAIN BOARD]
IC602
IC601
IC604
IC605
IC103
IC6001
CN602
Q6001
Q6002
D6008
D6003
D6004
D6006
D602
D603
D605
D607
FL351 COUNTER DISPLAY
A
PLAY
DOLBY NR
B C OFF
HIGH
NORM
CD SYNC
B
REC
PLAY
AMS
RELAY
[PANEL BOARD]
S362
S362, D352
HIGH SPEED
S361
S361, D351
NORMAL SPEED
S351
S352, D353
SYNCHRO
S368
DIRECTION
S350
DOLBY NR
RESET
D352
D351
D353
IC351
02

• Refer to page 10 for Semiconductor Lead Layouts.



6
7
8
9
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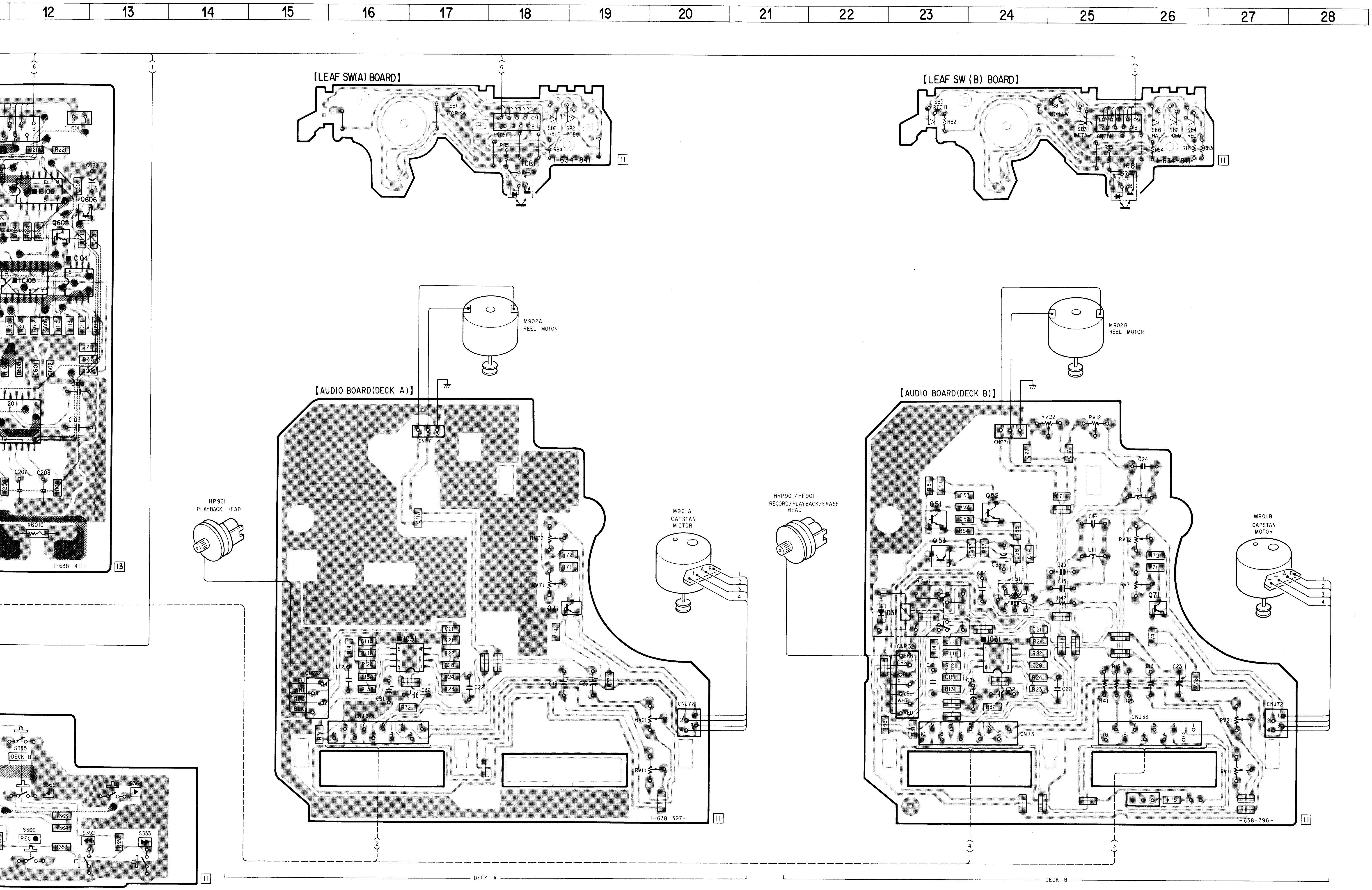
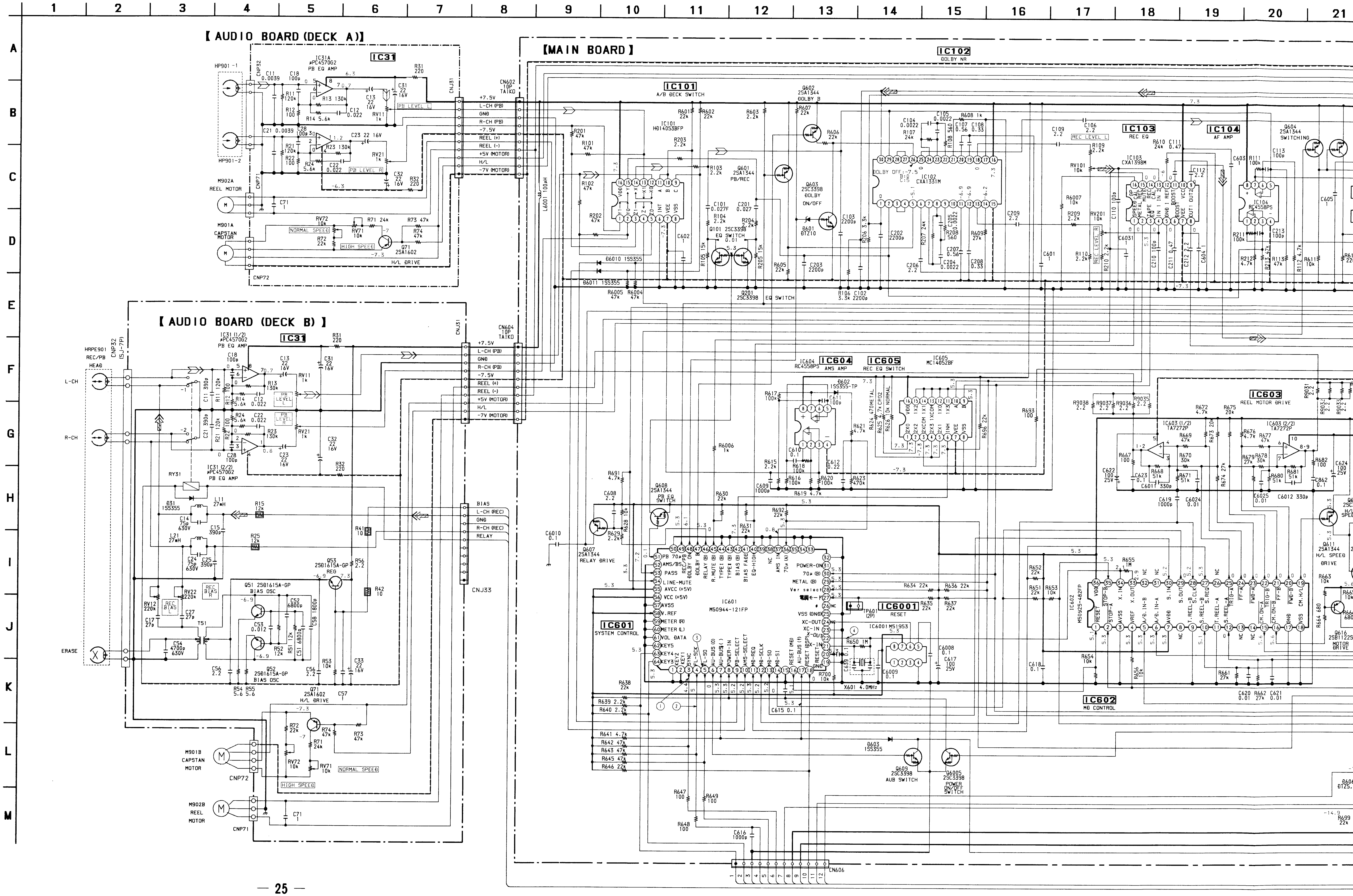
11
12
13
14
15
16
17
18
19
20
21
22
23
IC601
IC101
IC102
IC103
IC104
IC105
IC106
CN601
CN602
TP601
RV201
RV101
Q601
Q602
Q603
Q604
Q605
Q606
Q607
Q608
Q6001
Q6002
Q6003
Q101
Q102
Q202
D603
D606
D607
D6010
D6011
D6012
X601
1-638-411-
13
FL351
COUNTER DISPLAY
A
PLAY
HIGH
NORM
CD SYNC
B
PLAY
REC
DOLBY NR
B C OFF
AMS
RELAY
IC351
S356
DECK A
S355
DECK B
S365
S364
S363
S366
REC ●
S352
S353
11
【LEAF SW(A) BOARD】
S81
STOP SW
CNP81
S86
HALF
S82
70EQ
IC81
1-634-841-
11
M902A
REEL MOTOR
【AUDIO BOARD(DECK A)】
CNP71
HP901
PLAYBACK HEAD
M901A
CAPSTAN
MOTOR
HRP901/HE901
RECORD/PLAYBACK/ERASE
HEAD
RV72
RV71
Q71
IC31
CNP32
YEL
WHT
RED
BLK
CNJ31A
CNJ72
RV21
RV11
1-638-397-
11
DECK-A
【LE
【AUDIO B
D31
CNP32
BRN
ORG
BLK
BLU
YEL
WHT
RED

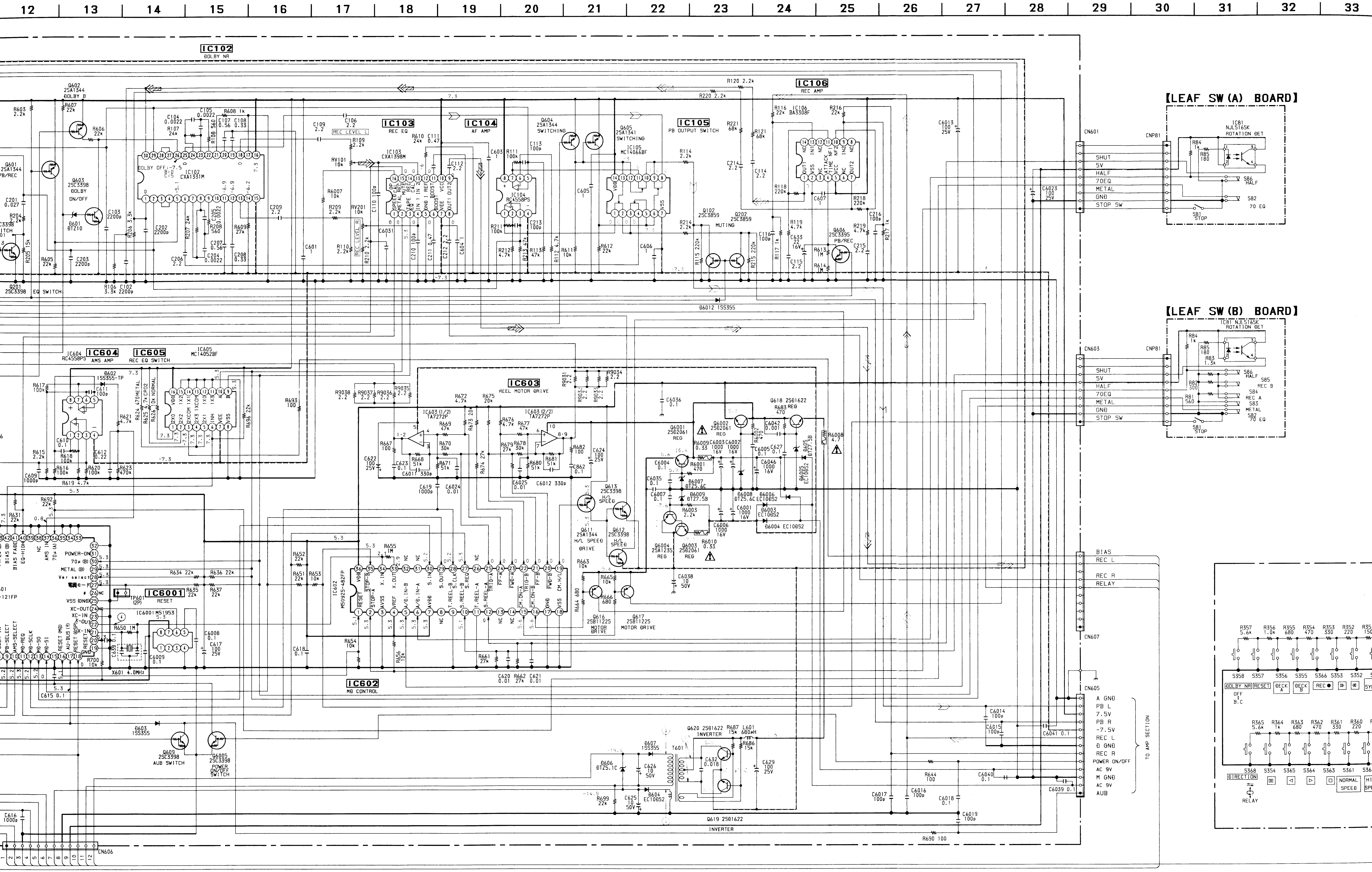

12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
[LEAF SW(A) BOARD]
S81 STOP SW
CNP81
S86 HALF
S82 70EQ
R85
R84
IC81
1-634-841-
11
[LEAF SW (B) BOARD]
S85 REC B
R82
S81 STOP SW
S83 METAL
CNP81
S86 HALF
S82 70EQ
S84 REC A
R81
R83
R85
R84
IC81
1-634-841-
11
M902A REEL MOTOR
M902B REEL MOTOR
[AUDIO BOARD(DECK A)]
[AUDIO BOARD(DECK B)]
CNP71
HP901 PLAYBACK HEAD
HRP901 / HE901 RECORD/PLAYBACK/ERASE HEAD
M901A CAPSTAN MOTOR
M901B CAPSTAN MOTOR
RV72
RV71
R72
R71
Q71
R74
IC31
CNP32
YEL
WHT
RED
BLK
BRN
ORG
BLU
CNJ31A
CNJ31
CNJ33
CNJ72
RV21
RV11
RV22
RV12
Q51
Q52
Q53
T51
D31
RY31
L11
L21
1-638-397-
1-638-396-
11
TP601
IC106
IC105
IC104
Q605
Q606
C633
R6010
1-638-411-
13
S355 DECK B
S365
S364
S366 REC
S352
S353
R363
R364
R353
11
DECK-A
DECK-B
2
3
4
5
6

### 4-6. SCHEMATIC DIAGRAM —AEP, UK, Germany, Australian Model— • Refer to page 30 for Waveforms. • Refer to page 31 for IC Block Diagrams.



【AUDIO BOARD (DECK A)】
IC31
IC31A µPC4570G2 PB EQ AMP
HP901-1
HP901-2
M902A REEL MOTOR
M901A CAPSTAN MOTOR
NORMAL SPEED
HIGH SPEED
Q71 2SA1602 H/L DRIVE
PB LEVEL L
PB LEVEL R
CNP32
CNP71
CNP72
CNJ31
CN602 10P TAIKO
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V (MOTOR)
H/L
-7V (MOTOR)
【AUDIO BOARD (DECK B)】
IC31 (1/2) µPC4570G2 PB EQ AMP
IC31 (2/2) µPC4570G2 PB EQ AMP
HRPE901 REC/PB HEAD
L-CH
R-CH
ERASE
CNP32 (SJ-7P)
RY31
D31 1SS355
L11 27mH
L21 27mH
REC BIAS L
REC BIAS R
Q51 2SD1615A-GP BIAS OSC
Q52 2SD1615A-GP BIAS OSC
Q53 2SD1615A-GP REG
T51
Q71 2SA1602 H/L DRIVE
CN604 10P TAIKO
BIAS
L-CH (REC)
GND
R-CH (REC)
RELAY
CNJ33
M901B CAPSTAN MOTOR
M902B REEL MOTOR
CNP72
CNP71
【MAIN BOARD】
IC101 A/B DECK SWITCH
IC101 HD14053BFP
IC102 DOLBY NR
IC102 CXA1331M
Q602 2SA1344 DOLBY B
Q601 2SA1344 PB/REC
Q603 2SC3398 DOLBY ON/OFF
D601 DTZ10
Q101 2SC3398 EQ SWITCH
Q201 2SC3398 EQ SWITCH
D6010 1SS355
D6011 1SS355
L6001 100µH
IC103 REC EQ
IC103 CXA1398M
IC104 AF AMP
IC104 RC4558PS
Q604 2SA1344 SWITCHING
REC LEVEL L
REC LEVEL R
IC604 RC4558PS AMS AMP
IC605 REC EQ SWITCH
IC605 MC14052BF
D602 1SS355-TP
IC603 REEL MOTOR DRIVE
IC603 (1/2) TA7272P
IC603 (2/2) TA7272P
Q608 2SA1344 PB EQ SWITCH
Q607 2SA1344 RELAY DRIVE
IC601 SYSTEM CONTROL
IC601 M50944-121FP
IC6001 RESET
IC6001 M51953
X601 4.0MHz
TP601 (2P)
IC602 MD CONTROL
IC602 M50925-482FP
Q611 2SA1344 H/L SPEED DRIVE
Q616 2SB1122S MOTOR DRIVE
D603 1SS355
Q609 2SC3398 AUB SWITCH
Q6005 2SC3398 POWER ON/OFF SWITCH
CN606
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
A B C D E F G H I J K L M

for IC Block Diagrams.


12
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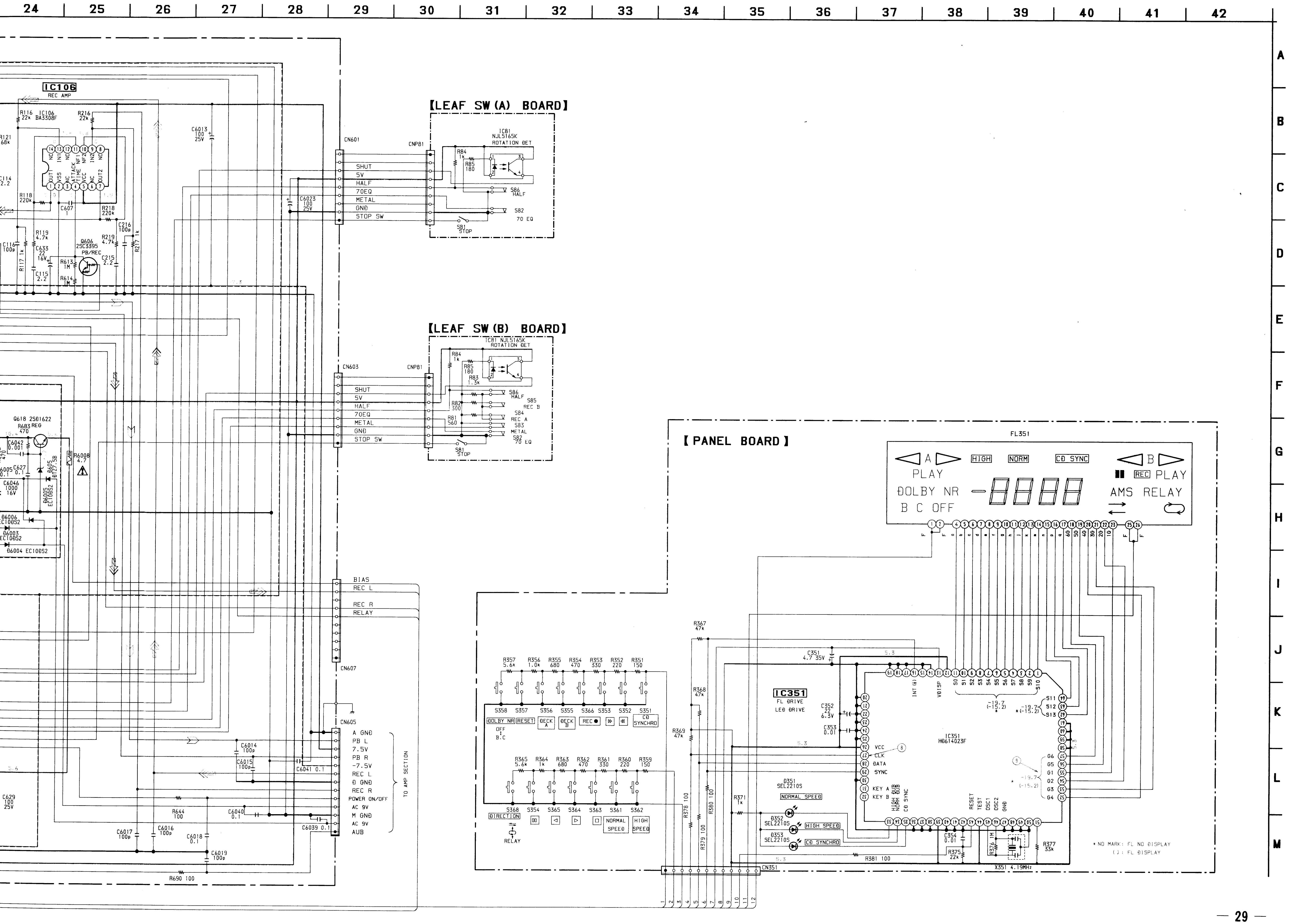
24
25
26
27
28
29
30
31
32
33
IC102
DOLBY NR
IC102 CXA1331M
IC103
REC EQ
IC103 CXA1398M
IC104
AF AMP
IC104 RC4558PS
IC105
PB OUTPUT SWITCH
IC105 MC14066BF
IC106
REC AMP
IC106 BA3308F
Q602 2SA1344 DOLBY B
Q603 2SC3398 DOLBY ON/OFF
Q601 2SA1344 PB/REC
Q201 2SC3398 EQ SWITCH
Q604 2SA1344 SWITCHING
Q605 2SA1341 SWITCHING
Q102 2SC3859
Q202 2SC3859
MUTING
Q606 2SC3395 PB/REC
D6012 1SS355
【LEAF SW (A) BOARD】
IC81 NJL5165K ROTATION DET
CN601
CNP81
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
S86 HALF
S82 70 EQ
S81 STOP
【LEAF SW (B) BOARD】
IC81 NJL5165K ROTATION DET
CN603
S86 HALF
S85 REC B
S84 REC A
S83 METAL
S82 70 EQ
S81 STOP
IC604 RC4558PS
IC604
AMS AMP
IC605
REC EQ SWITCH
IC605 MC14052BF
IC603
REEL MOTOR DRIVE
IC603 (1/2) TA7272P
IC603 (2/2) TA7272P
Q618 2SD1622 REG
Q6001 2SD2061 REG
Q6002 2SD2061 REG
Q6004 2SA1235 REG
Q6003 2SD2061 REG
Q613 2SC3398 H/L SPEED
Q611 2SA1344 H/L SPEED DRIVE
Q612 2SC3398 H/L SPEED
Q616 2SB1122S MOTOR DRIVE
Q617 2SB1122S MOTOR DRIVE
IC602 M50925-482FP
IC602
MD CONTROL
IC6001
RESET
IC6001 M51953
X601 4.0MHz
TP601 (2P)
Q609 2SC3398 AUB SWITCH
Q6005 2SC3398 POWER ON/OFF SWITCH
D603 1SS355
CN606
CN607
BIAS
REC L
REC R
RELAY
CN605
A GND
PB L
7.5V
PB R
-7.5V
REC L
D GND
REC R
POWER ON/OFF
AC 9V
M GND
AC 9V
AUB
TO AMP SECTION
Q620 2SD1622 INVERTER
Q619 2SD1622 INVERTER
T601
L601 680μH
D606 DTZ5.1C
D607 1SS355
D604 EC10DS2
R690 100
S358
S357
S356
S355
S366
S353
S352
DOLBY NR
RESET
DECK A
DECK B
REC ●
OFF
B.C
S368
S354
S365
S364
S363
S361
DIRECTION
NORMAL SPEED
RELAY


24
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26
27
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29
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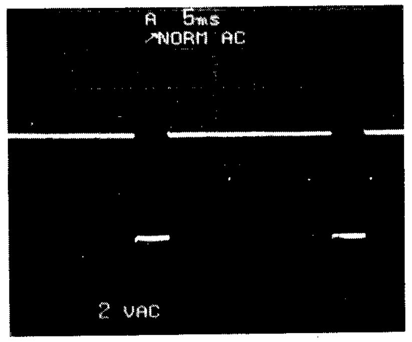
31
32
33
34
35
36
37
38
39
40
41
42
A
B
C
D
E
F
G
H
I
J
K
L
M
IC106
REC AMP
R116 22k
IC106 BA3308F
R216 22k
R121 68k
C114 2.2
R118 220k
C607 1
R218 220k
C216 100p
R119 4.7k
C633 22 16V
Q606 2SC3395 PB/REC
R219 4.7k
R217 1k
C116 100p
R117 1k
R613 1M
R614 1M
C215 2.2
C115 2.2
C6013 100 25V
CN601
C6023 100 25V
SHUT
5V
HALF
70EQ
METAL
GND
STOP SW
【LEAF SW (A) BOARD】
CNP81
IC81 NJL5165K ROTATION DET
R84 1k
R85 180
S86 HALF
S82 70 EQ
S81 STOP
【LEAF SW (B) BOARD】
CN603
IC81 NJL5165K ROTATION DET
R83 1.3k
R82 300
R81 560
S85 REC B
S84 REC A
S83 METAL
S82 70 EQ
Q618 2SD1622
R683 REG 470
C6042 0.001
C6005 0.1
C627 0.1
D605 DTZ7.5B
R6008 4.7
C6046 1000 16V
D6005 EC10QS2
D6006 EC10QS2
D6003 EC10QS2
D6004 EC10QS2
BIAS
REC L
REC R
RELAY
CN607
CN605
A GND
PB L
7.5V
PB R
-7.5V
REC L
D GND
REC R
POWER ON/OFF
AC 9V
M GND
AC 9V
AUB
TO AMP SECTION
C6014 100p
C6015 100p
C6041 0.1
C6040 0.1
C6039 0.1
C629 100 25V
R644 100
C6017 100p
C6016 100p
C6018 0.1
C6019 100p
R690 100
【PANEL BOARD】
FL351
A
B
HIGH
NORM
CD SYNC
PLAY
REC
DOLBY NR
AMS RELAY
B C OFF
R357 5.6k
R356 1.0k
R355 680
R354 470
R353 330
R352 220
R351 150
S358
S357
S356
S355
S366
S353
S352
S351
DOLBY NR
RESET
DECK A
DECK B
REC●
CD SYNCHRO
OFF B.C
R365 5.6k
R364 1k
R363 680
R362 470
R361 330
R360 220
R359 150
S368
S354
S365
S364
S363
S361
S362
DIRECTION
RELAY
NORMAL SPEED
HIGH SPEED
R367 47k
R368 47k
R369 47k
R378 100
R379 100
R380 100
R371 1k
C351 4.7 35V
IC351
FL DRIVE
LED DRIVE
C352 22 6.3V
C353 0.01
IC351 HD614023F
VCC
CLK
DATA
SYNC
KEY A
KEY B
D351 SEL2210S
NORMAL SPEED
D352 SEL2210S
HIGH SPEED
D353 SEL2210S
CD SYNCHRO
C354 0.01
R375 22k
R381 100
R377 33k
X351 4.19MHz
CN351
RESET
TEST
OSC1
OSC2
GND
S11
S12
S13
G6
G5
G1
G2
G3
G4
-19.7 (-15.2)
* NO MARK: FL NO DISPLAY
( ): FL DISPLAY
5.3
1
2
3
4
5
6
7
8
9
10
11
12

## • WAVEFORMS

①



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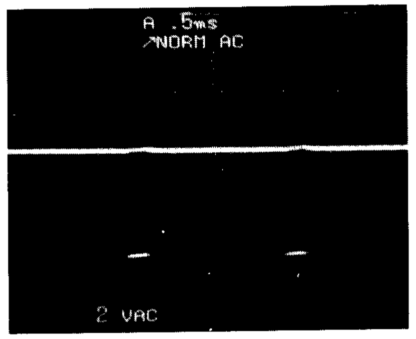

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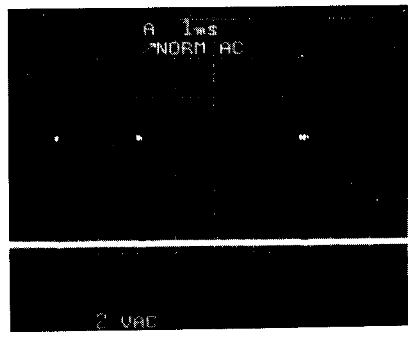

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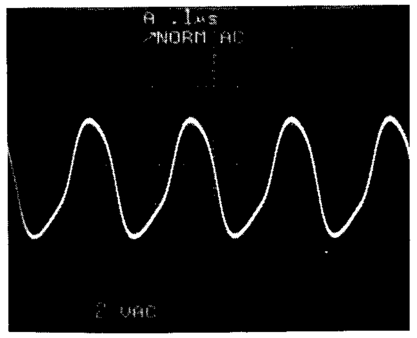

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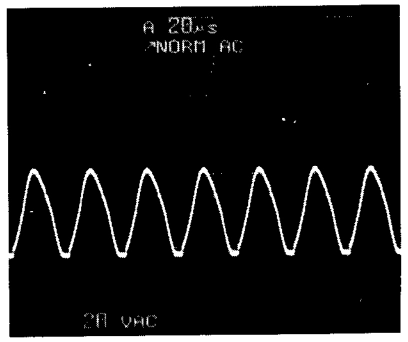

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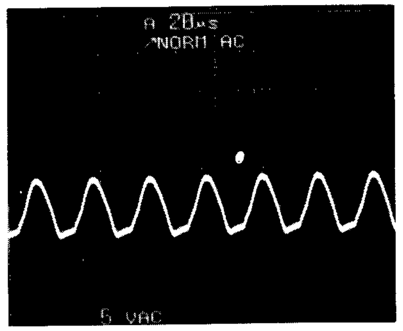

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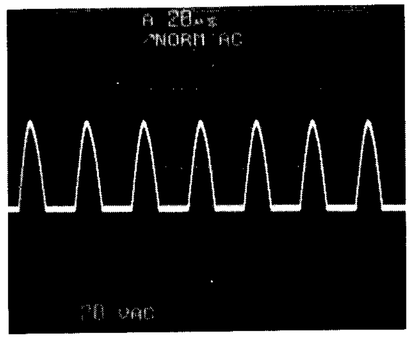

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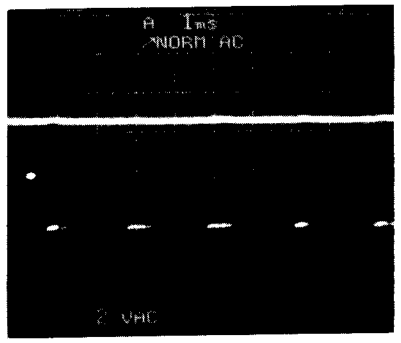
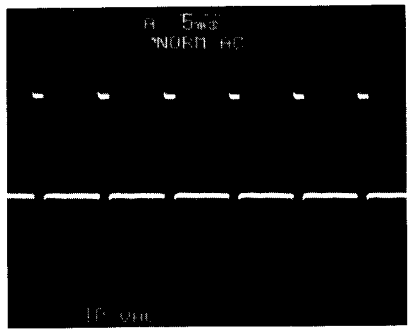
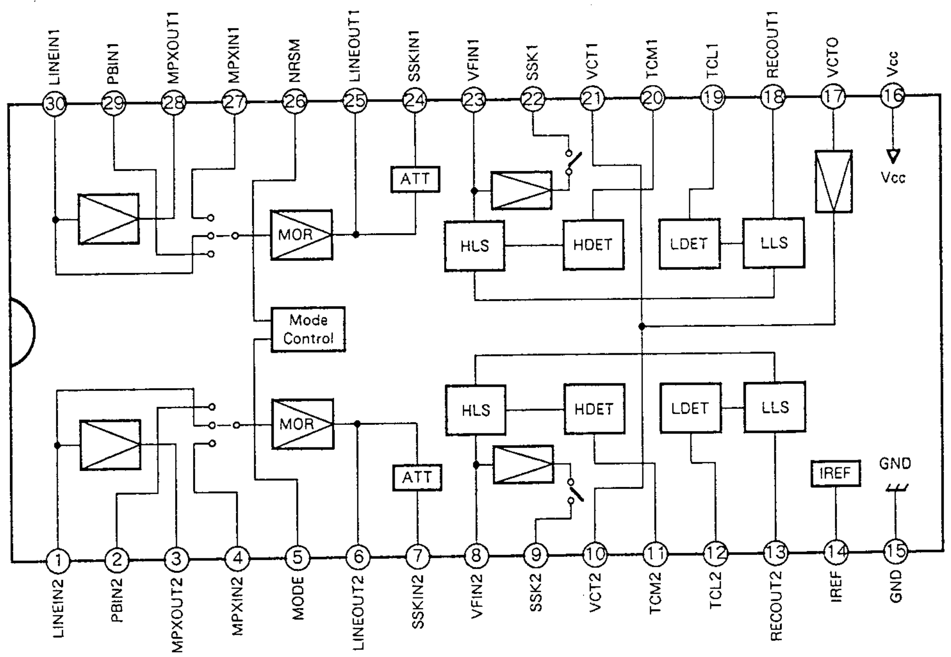


⑨

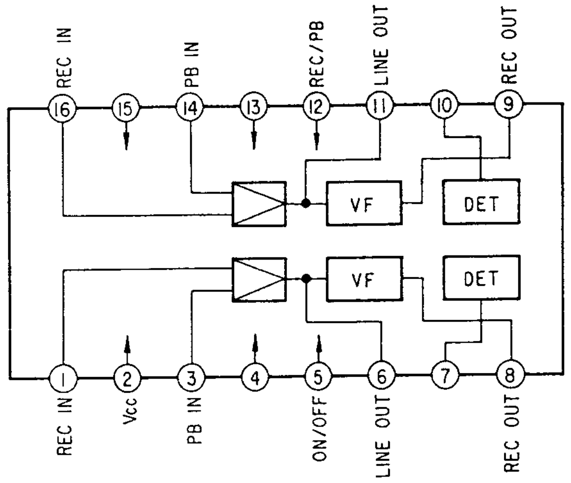


## • IC BLOCK DIAGRAMS

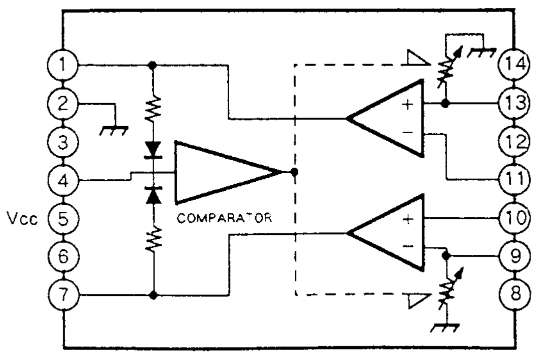
### IC102 CXA1331M : AEP, UK, Germany, Australian Model


LINEIN1
PBIN1
MPXOUT1
MPXIN1
NRSM
LINEOUT1
SSKIN1
VFIN1
SSK1
VCT1
TCM1
TCL1
RECOUT1
VCTO
Vcc
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
Vcc
ATT
MOR
HLS
HDET
LDET
LLS
Mode Control
MOR
HLS
HDET
LDET
LLS
ATT
IREF
GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
LINEIN2
PBIN2
MPXOUT2
MPXIN2
MODE
LINEOUT2
SSKIN2
VFIN2
SSK2
VCT2
TCM2
TCL2
RECOUT2
IREF
GND

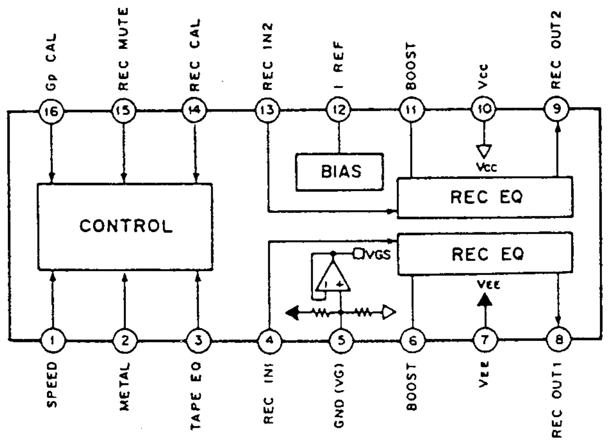
### IC102 CXA1101M : US, Canadian, E Model


REC IN
PB IN
REC/PB
LINE OUT
REC OUT
16
15
14
13
12
11
10
9
VF
DET
VF
DET
1
2
3
4
5
6
7
8
REC IN
Vcc
PB IN
ON/OFF
LINE OUT
REC OUT

### IC106 BA3308F


1
2
3
4
Vcc 5
6
7
COMPARATOR
14
13
12
11
10
9
8

### IC103 CXA1398M

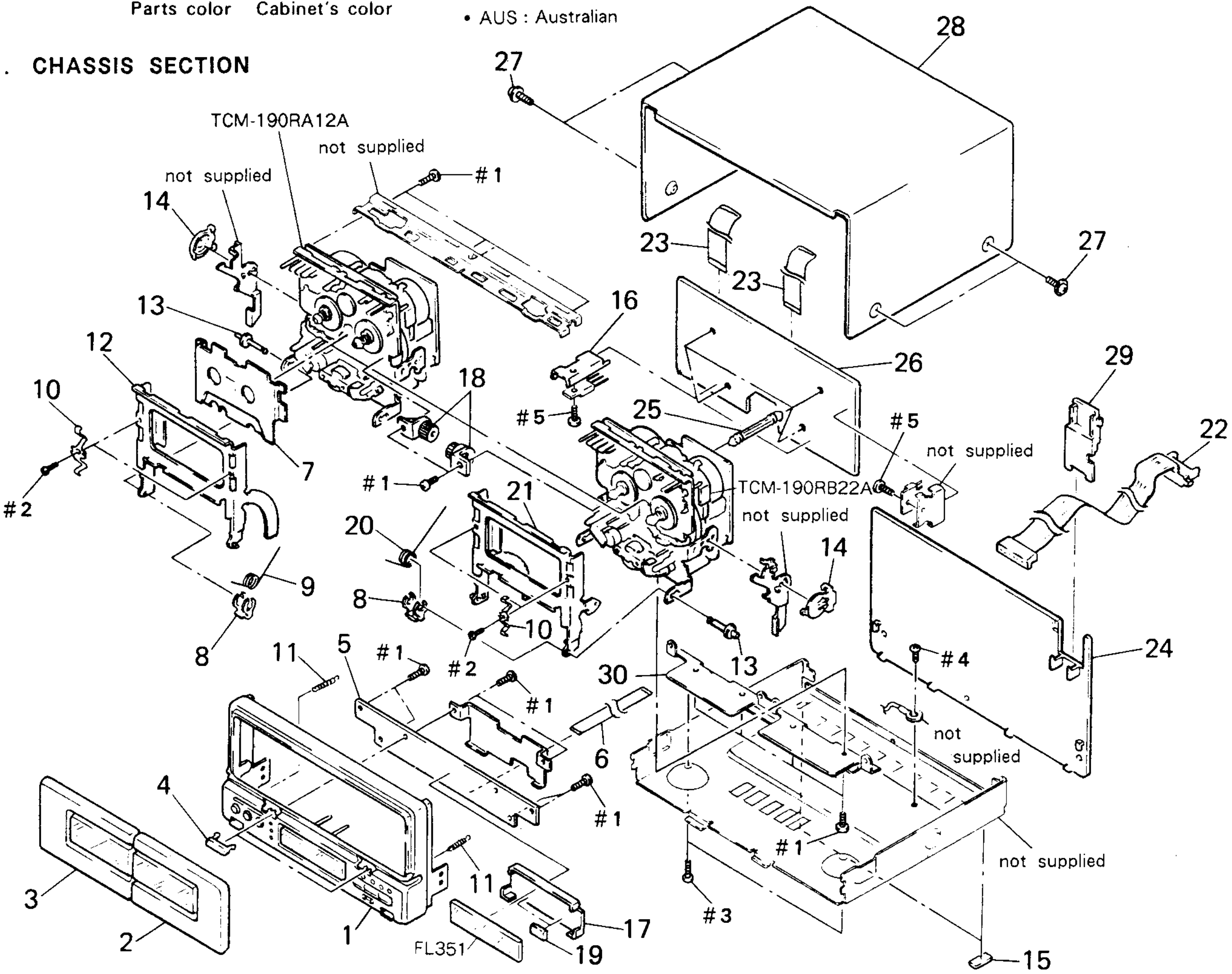

Gp CAL
REC MUTE
REC CAL
REC IN2
I REF
BOOST
Vcc
REC OUT2
16
15
14
13
12
11
10
9
BIAS
Vcc
REC EQ
CONTROL
VGS
REC EQ
VEE
1
2
3
4
5
6
7
8
SPEED
METAL
TAPE EQ
REC IN1
GND (VG)
BOOST
VEE
REC OUT1

# SECTION 5
# EXPLODED VIEWS

NOTE:

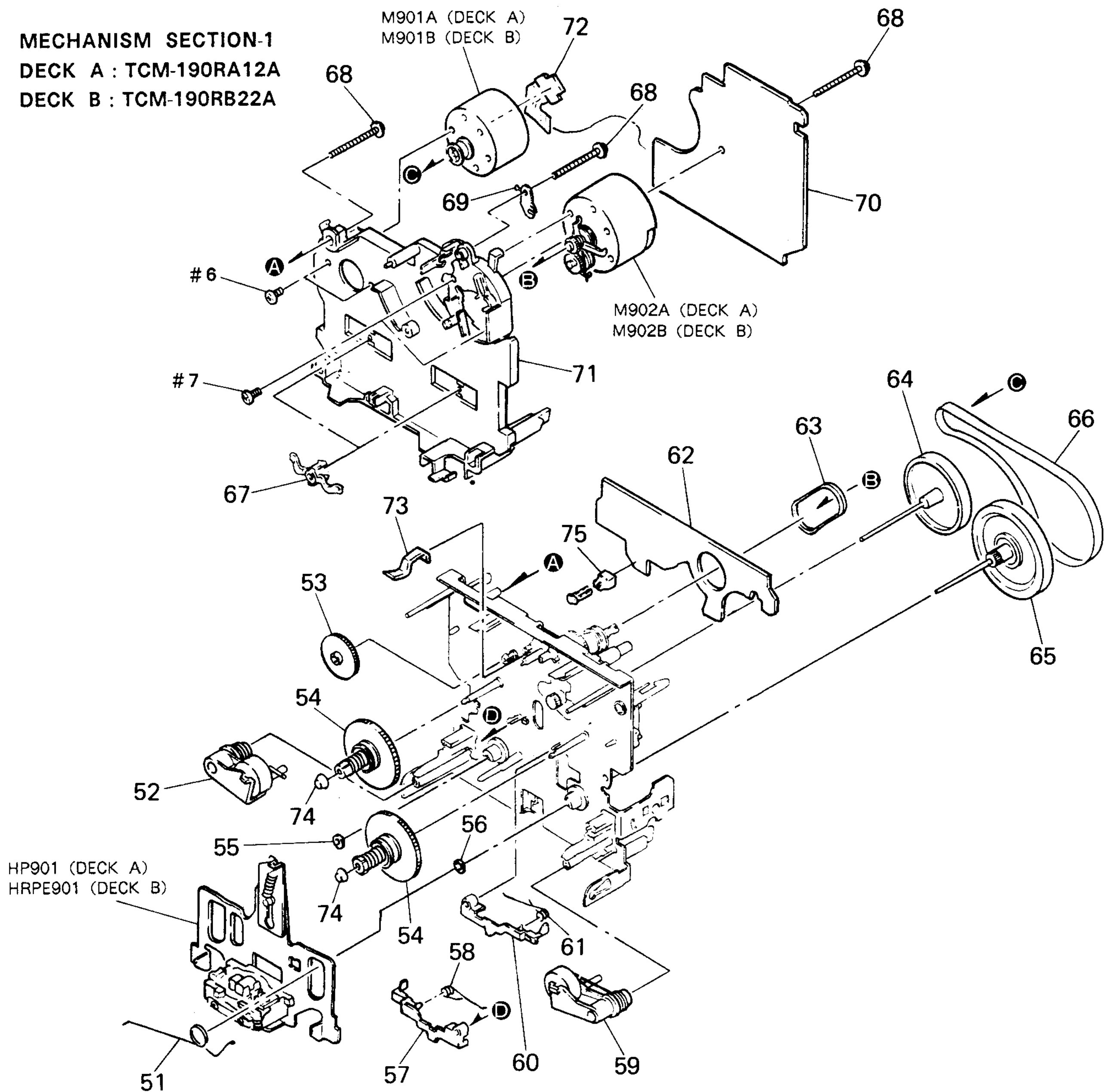
- −XX, −X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)....(RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
  - G : Germany
  - AUS : Australian

## 5-1. CHASSIS SECTION


27
28
TCM-190RA12A
not supplied
not supplied
#1
14
13
12
10
#2
23
23
27
16
18
#5
25
26
29
22
#5
not supplied
7
#1
21
TCM-190RB22A
not supplied
14
20
9
8
8
10
#2
#1
11
5
13
30
#4
24
not supplied
supplied
#1
6
4
#1
3
11
#1
not supplied
#3
2
1
FL351
17
19
15

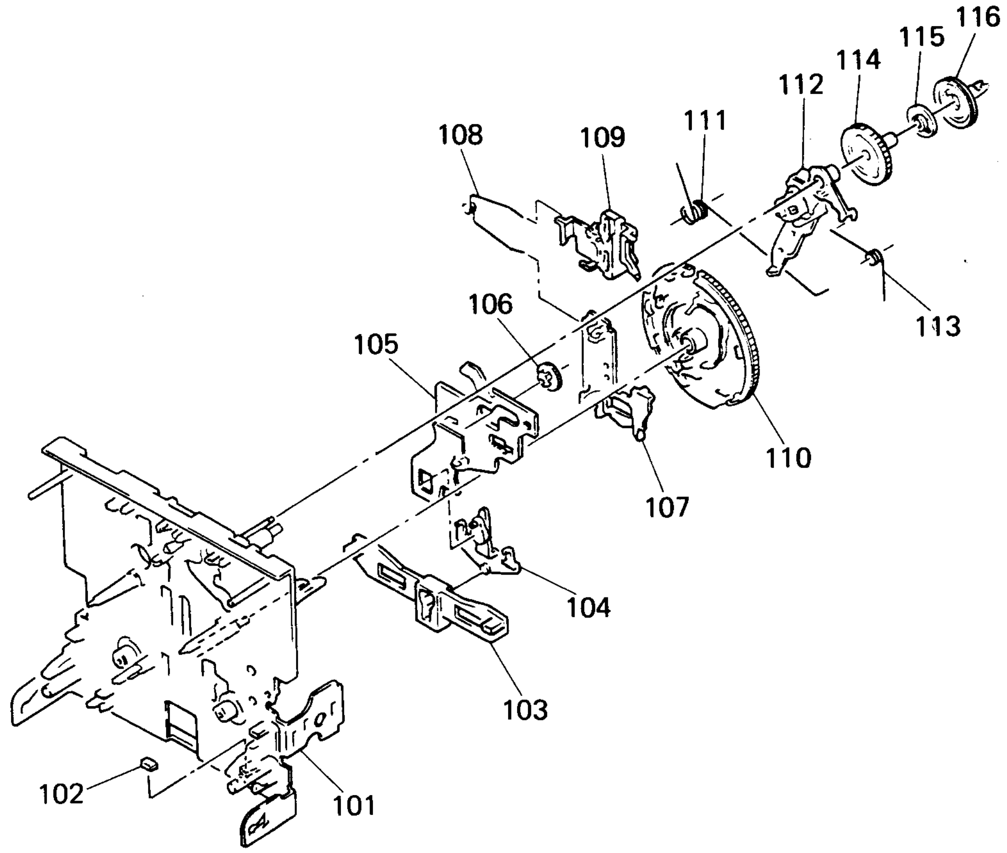
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-3362-860-1 | PANEL ASSY, FRONT | |
| 2 | X-3362-859-1 | LID (B) ASSY, CASSETTE (US, Canadian, E) | |
| 2 | X-4941-577-1 | LID (B) ASSY, CASSETTE (AEP, UK, G, AUS) | |
| 3 | X-3362-858-1 | LID (A) ASSY, CASSETTE | |
| 4 | 3-367-718-01 | COVER (AZIMUTH) | |
| 5 | * A-2006-424-A | PANEL BOARD, COMPLETE (AEP, UK, G, AUS) | |
| 5 | * A-2006-426-A | PANEL BOARD, COMPLETE (US, Canadian, E) | |
| 6 | 1-590-904-11 | WIRE, FLAT TYPE (12 CORE) | |
| 7 | 3-367-711-01 | RETAINER, CASSETTE | |
| 8 | 3-367-720-01 | RING (W), RETAINING | |
| 9 | 3-354-959-01 | SPRING (LOADING L), TORSION | |
| 10 | 3-340-137-01 | SPRING, CASSETTE RETAINER | |
| 11 | 3-489-099-11 | SPRING, TENSION | |
| 12 | X-3362-857-1 | HOLDER (L) ASSY, CASSETTE | |
| 13 | 3-367-721-01 | SHAFT (FULCRUM SHAFT) | |
| 14 | 3-354-957-01 | JOINT (LOCK LEVER) | |
| 15 | 4-930-336-01 | FOOT (FELT) | |
| 16 | * 3-309-144-21 | HEAT SINK | |
| 17 | * 3-367-839-01 | HOLDER, FL TUBE | |
| 18 | 3-354-963-01 | DAMPER | |
| 19 | * 4-932-810-11 | CUSHION (FL) | |
| 20 | 3-354-960-01 | SPRING (LOADING R), TORSION | |
| 21 | X-3362-856-1 | HOLDER (R) ASSY, CASSETTE | |
| 22 | 1-590-579-11 | CORD (WITH CONNECTOR) | |
| 23 | 1-590-902-11 | WIRE, FLAT TYPE (9 CORE) | |
| 24 | * 3-367-730-01 | PANEL, BACK | |
| 25 | * 3-682-419-21 | HOLDER, P.C.B | |
| 26 | * A-2006-423-A | MAIN BOARD, COMPLETE (AEP, UK, G, AUS) | |
| 26 | * A-2006-425-A | MAIN BOARD, COMPLETE (US, Canadian, E) | |
| 27 | 3-704-366-01 | SCREW (CASE) (M3X8) | |
| 28 | * 4-944-213-01 | CASE | |
| 29 | * 4-930-344-01 | HOLDER (CONNECTION CORD) | |
| 30 | * 3-367-724-01 | JOINT (LOWER) | |
| FL351 | 1-519-638-11 | INDICATOR TUBE, FLUORESCENT | |

## 5-2. MECHANISM SECTION-1
## DECK A : TCM-190RA12A
## DECK B : TCM-190RB22A


M901A (DECK A)
M901B (DECK B)
72
68
68
68
69
70
A
B
#6
M902A (DECK A)
M902B (DECK B)
#7
71
64
C
66
63
B
62
67
73
75
A
53
54
D
52
74
56
55
HP901 (DECK A)
HRPE901 (DECK B)
74
54
58
61
D
51
57
60
59
65

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 3-359-455-01 | SPRING, TORSION | |
| 52 | X-3359-409-1 | LEVER (PINCH LEVER REV) ASSY | |
| 53 | 3-359-424-01 | GEAR (REV GEAR) | |
| 54 | X-3359-404-1 | TABLE ASSY, REEL | |
| 55 | 3-356-714-01 | WASHER | |
| 56 | 3-356-713-01 | WASHER | |
| 57 | 3-354-956-01 | LEVER (EJ SAFTY LEVER R) | |
| 58 | 3-354-962-01 | SPRING (EJ SAFTY SPRING R) | |
| 59 | X-3359-408-1 | LEVER (PINCH LEVER FWD) ASSY | |
| 60 | 3-354-955-01 | LEVER (EJ SAFTY LEVER L) | |
| 61 | 3-354-961-01 | SPRING (EJ SAFTY SPRING L) | |
| 62 | * 1-634-841-11 | LEAF SW (A), (B) BOARD | |
| 63 | 3-359-466-01 | BELT (FR), SQUARE | |
| 64 | X-3359-410-1 | FLYWHEEL (REV) ASSY | |
| 65 | X-3359-406-1 | FLYWHEEL (FWD) COMPLETE ASSY | |
| 66 | 3-359-417-01 | BELT (FLAT), CAPSTAN | |
| 67 | 3-575-321-00 | RETAINER, THRUST, CAPSTAN | |
| 68 | 3-359-414-01 | SCREW (+PTPWH 2X23) | |
| 69 | 3-359-450-01 | PLATE, GROUND | |
| 70 | * A-2006-399-A | MOUNTED PCB (RA12A), AUDIO (DECK A) | |
| 70 | * A-2006-400-A | MOUNTED PCB (RB22A), AUDIO (DECK B) | |
| 71 | * 3-359-436-01 | BASE (THRUST RETAINER), FITTING | |
| 72 | 1-638-983-11 | PC BOARD, MOTOR FLEXIBLE | |
| 73 | 3-359-430-01 | SPRING (CASSETTE RETAINER), LEAF | |
| 74 | 3-362-308-01 | CAP (REEL) | |
| 75 | 3-343-419-01 | HOLDER (S SENSER A) | |
| HP901 | A-2003-837-A | BASE ASSY, HEAD (DECK A) | |
| HRPE901 | A-2003-838-A | BASE ASSY, HEAD (DECK B) | |
| M901A | X-3359-417-1 | MOTOR ASSY, CAPSTAN | |
| M901B | X-3359-417-1 | MOTOR ASSY, CAPSTAN | |
| M902A | X-3363-501-1 | MOTOR ASSY, REEL | |
| M902B | X-3363-501-1 | MOTOR ASSY, REEL | |

## 5-3. MECHANISM SECTION-2



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | X-3359-415-1 | CHASSIS ASSY, MECHANICAL | |
| 102 | 3-359-469-01 | SPACER | |
| 103 | * 3-359-425-01 | SLIDER (REVERSE SLIDER) | |
| 104 | 3-359-426-01 | LEVER (REVERSE LEVER) | |
| 105 | * 3-359-415-01 | SLIDER (TRIGGER SLIDER) | |
| 106 | 3-359-448-01 | GEAR (TRIGGER) | |
| 107 | * 3-359-427-01 | SLIDER (LEVERSE SLIDER) | |
| 108 | 3-359-454-01 | SPRING, TORSION | |
| 109 | 3-359-429-01 | SLIDER (BRAKE PLATE) | |
| 110 | 3-359-420-01 | GEAR (CAM GEAR) | |
| 111 | 3-359-456-01 | SPRING (TRIGGER SPRING), TORSION | |
| 112 | X-3359-405-1 | LEVER (FR ARM) ASSY | |
| 113 | 3-359-453-01 | SPRING (FR ARM), TORSION | |
| 114 | 3-359-419-01 | GEAR (FR GEAR) | |
| 115 | 3-359-421-01 | CLUTCH (REEL DISK) | |
| 116 | 3-359-418-01 | PULLEY (FR PULLEY) | |

# SECTION 6
# ELECTRICAL PARTS LIST

**LEAF SW(A)** **LEAF SW(B)** **MAIN**

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA.... : μA...., uPA.... : μPA....
  uPB.... : μPB...., uPC.... : μPC....
  uPD.... : μPD....
- CAPACITORS
  uF : μF
- COILS
  uH : μH

• G : Germany
• AUS : Australian

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | * 1-634-841-11 | LEAF SW (A) BOARD<br>***************** | |
| | 3-343-419-01 | HOLDER (S SENSER A) | |
| | | < CONNECTOR > | |
| CNP81 | * 1-568-852-11 | SOCKET, CONNECTOR 9P | |
| | | < IC > | |
| IC81 | 8-719-710-03 | IC PHOTO REFLECTOR NJL5165K-B | |
| | | < RESISTOR > | |
| R84 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R85 | 1-249-408-11 | CARBON 180 5% 1/4W | |
| | | < SWITCH > | |
| S81 | 1-571-958-11 | SWITCH, PUSH (1 KEY) (STOP) | |
| S82 | 1-571-281-21 | SWITCH, LEAF (70EQ) | |
| S86 | 1-571-281-21 | SWITCH, LEAF (HALF) | |
| ************************************************************** | | | |
| | * 1-634-841-11 | LEAF SW (B) BOARD<br>***************** | |
| | 3-343-419-01 | HOLDER (S SENSER A) | |
| | | < CONNECTOR > | |
| CNP81 | * 1-568-852-11 | SOCKET, CONNECTOR 9P | |
| | | < IC > | |
| IC81 | 8-719-710-03 | IC PHOTO REFLECTOR NJL5165K-B | |
| | | < RESISTOR > | |
| R81 | 1-249-414-11 | CARBON 560 5% 1/4W | |
| R82 | 1-247-818-11 | CARBON 300 5% 1/4W | |
| R83 | 1-247-834-11 | CARBON 1.3K 5% 1/4W | |
| R84 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R85 | 1-249-408-11 | CARBON 180 5% 1/4W | |
| | | < SWITCH > | |
| S81 | 1-571-958-11 | SWITCH, PUSH (1 KEY) (STOP) | |
| S82 | 1-571-281-21 | SWITCH, LEAF (70EQ) | |
| S83 | 1-571-281-21 | SWITCH, LEAF (METAL) | |
| S84 | 1-571-281-21 | SWITCH, LEAF (REC A) | |
| S85 | 1-571-281-21 | SWITCH, LEAF (REC B) | |
| S86 | 1-571-281-21 | SWITCH, LEAF (HALF) | |
| ************************************************************** | | | |
| | * A-2006-423-A | MAIN BOARD, COMPLETE (AEP, UK, G, AUS) | |
| | * A-2006-425-A | MAIN BOARD, COMPLETE (US, Canadian, E)<br>************************************ | |
| | * 3-309-144-21 | HEAT SINK | |
| | | < CAPACITOR > | |
| C101 | 1-136-158-00 | FILM 0.027uF 5% 50V | |
| C102 | 1-163-013-11 | CERAMIC CHIP 0.0022uF 10% 25V | (US, Canadian, E) |
| C102 | 1-164-161-11 | CERAMIC CHIP 0.0022uF 10% 100V | (AEP, UK, G, AUS) |
| C103 | 1-163-013-11 | CERAMIC CHIP 0.0022uF 10% 25V | (US, Canadian, E) |
| C103 | 1-164-161-11 | CERAMIC CHIP 0.0022uF 10% 100V | (AEP, UK, G, AUS) |

## MAIN

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C104 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C105 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C106 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C107 | 1-124-254-00 | ELECT | 0.68uF | 20% | 50V<br>(US, Canadian, E) |
| C107 | 1-136-174-00 | FILM | 0.56uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C108 | 1-136-171-00 | FILM | 0.33uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C109 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C110 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C111 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| C112 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C113 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C114 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C115 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C116 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C201 | 1-136-158-00 | FILM | 0.027uF | 5% | 50V |
| C202 | 1-163-013-11 | CERAMIC CHIP | 0.0022uF | 10% | 25V<br>(US, Canadian, E) |
| C202 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V<br>(AEP, UK, G, AUS) |
| C203 | 1-163-013-11 | CERAMIC CHIP | 0.0022uF | 10% | 25V<br>(US, Canadian, E) |
| C203 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V<br>(AEP, UK, G, AUS) |
| C204 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C205 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C206 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C207 | 1-124-254-00 | ELECT | 0.68uF | 20% | 50V<br>(US, Canadian, E) |
| C207 | 1-136-174-00 | FILM | 0.56uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C208 | 1-136-171-00 | FILM | 0.33uF | 5% | 50V<br>(AEP, UK, G, AUS) |
| C209 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C210 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C211 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| C212 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C213 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C214 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C215 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C216 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C601 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C602 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C603 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C604 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C605 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C606 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C607 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C608 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C609 | 1-163-141-00 | CERAMIC CHIP | 0.001uF | 5% | 50V |
| C610 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C611 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C612 | 1-164-222-11 | CERAMIC CHIP | 0.22uF | | 25V |
| C615 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C616 | 1-163-141-00 | CERAMIC CHIP | 0.001uF | 5% | 50V |
| C617 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |
| C618 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C619 | 1-163-141-00 | CERAMIC CHIP | 0.001uF | 5% | 50V |
| C620 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C621 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C622 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |
| C623 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C624 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |
| C625 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C626 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C627 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C629 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |
| C632 | 1-136-594-11 | FILM | 0.018uF | 5% | 100V |
| C633 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C639 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C862 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6001 | 1-124-360-00 | ELECT | 1000uF | 20% | 16V |
| C6002 | 1-124-360-00 | ELECT | 1000uF | 20% | 16V |
| C6003 | 1-124-360-00 | ELECT | 1000uF | 20% | 16V |
| C6004 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6005 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6006 | 1-124-360-00 | ELECT | 1000uF | 20% | 16V |
| C6007 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6008 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6009 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6010 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6011 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C6012 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C6013 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |
| C6014 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C6015 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C6016 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C6017 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C6018 | 1-163-038-00 | CERAMIC CHIP | 0.1uF | | 25V |
| C6019 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |

**MAIN**

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| C6023 | 1-123-332-00 | ELECT 47uF 20% 16V | (US, Canadian, E) |
| C6023 | 1-124-478-11 | ELECT 100uF 20% 25V | (AEP, UK, G, AUS) |
| C6024 | 1-124-478-11 | ELECT 100uF 20% 25V | (US, Canadian, E) |
| C6024 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | (AEP, UK, G, AUS) |
| C6025 | 1-124-478-11 | ELECT 100uF 20% 25V | (US, Canadian, E) |
| C6025 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | (AEP, UK, G, AUS) |
| C6031 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | |
| C6035 | 1-163-038-00 | CERAMIC CHIP 0.1uF 25V | |
| C6036 | 1-163-038-00 | CERAMIC CHIP 0.1uF 25V | |
| C6038 | 1-124-907-11 | ELECT 10uF 20% 50V | |
| C6039 | 1-163-038-00 | CERAMIC CHIP 0.1uF 25V | |
| C6040 | 1-163-038-00 | CERAMIC CHIP 0.1uF 25V | |
| C6041 | 1-163-038-00 | CERAMIC CHIP 0.1uF 25V | |
| C6042 | 1-163-141-00 | CERAMIC CHIP 0.001uF 5% 50V | (AEP, UK, G, AUS) |
| C6042 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | (US, Canadian, E) |
| C6043 | 1-164-232-11 | CERAMIC CHIP 0.01uF 50V | (US, Canadian, E) |
| C6044 | 1-163-141-00 | CERAMIC CHIP 0.001uF 5% 50V | (US, Canadian, E) |
| C6046 | 1-124-360-00 | ELECT 1000uF 20% 16V | |
| | | < CONNECTOR > | |
| CN602 | 1-580-783-11 | CONNECTOR, BOARD TO BOARD | |
| CN604 | 1-580-783-11 | CONNECTOR, BOARD TO BOARD | |
| CN606 | 1-568-795-11 | SOCKET, CONNECTOR 12P | |
| CN607 | 1-580-783-11 | CONNECTOR, BOARD TO BOARD | |
| | | < DIODE > | |
| D601 | 8-719-977-26 | DIODE DTZ10 | (AEP, UK, G, AUS) |
| D602 | 8-719-988-62 | DIODE 1SS355 | |
| D603 | 8-719-988-62 | DIODE 1SS355 | |
| D604 | 8-719-210-33 | DIODE EC10DS2 | |
| D605 | 8-719-977-16 | DIODE DTZ7.5B | |
| D606 | 8-719-977-00 | DIODE DTZ5.1C | |
| D607 | 8-719-988-62 | DIODE 1SS355 | |
| D6001 | 8-719-977-26 | DIODE DTZ101 | (US, Canadian, E) |
| D6002 | 8-719-977-26 | DIODE DTZ101 | (US, Canadian, E) |
| D6003 | 8-719-210-33 | DIODE EC10DS2 | |
| D6004 | 8-719-210-33 | DIODE EC10DS2 | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| D6005 | 8-719-210-33 | DIODE EC10DS2 | |
| D6006 | 8-719-210-33 | DIODE EC10DS2 | |
| D6007 | 8-719-977-04 | DIODE DTZ5.6C | |
| D6008 | 8-719-977-04 | DIODE DTZ5.6C | |
| D6009 | 8-719-977-16 | DIODE DTZ7.5B | |
| D6010 | 8-719-988-62 | DIODE 1SS355 | |
| D6011 | 8-719-988-62 | DIODE 1SS355 | |
| D6012 | 8-719-988-62 | DIODE 1SS355 | |
| | | < IC > | |
| IC101 | 8-759-300-71 | IC HD14053BFP | |
| IC102 | 8-752-037-90 | IC CXA1331M | (AEP, UK, G, AUS) |
| IC102 | 8-752-050-13 | IC CXA1101M | (US, Canadian, E) |
| IC103 | 8-752-056-00 | IC CXA1398M | |
| IC104 | 8-759-981-95 | IC RC4558-S | |
| IC105 | 8-759-516-47 | IC CD4066BCM | |
| IC106 | 8-759-998-71 | IC BA3308F | |
| IC601 | 8-759-636-37 | IC M50944-121FP | |
| IC602 | 8-759-636-67 | IC M50925-482FP | |
| IC603 | 8-759-207-05 | IC TA7272P | |
| IC604 | 8-759-981-95 | IC RC4558-S | |
| IC605 | 8-759-516-41 | IC CD4052BCM | (US, Canadian, E) |
| IC605 | 8-759-009-06 | IC MC14052BF | (AEP, UK, G, AUS) |
| IC6001 | 8-759-634-43 | IC M51953BFP | |
| | | < COIL > | |
| L601 | 1-410-761-11 | INDUCTOR 0.68mH | |
| L6001 | 1-410-482-31 | INDUCTOR 100uH | |
| | | < TRANSISTOR > | |
| Q101 | 8-729-805-41 | TRANSISTOR 2SC3398 | |
| Q102 | 8-729-805-42 | TRANSISTOR 2SC3859 | |
| Q201 | 8-729-805-41 | TRANSISTOR 2SC3398 | |
| Q202 | 8-729-805-42 | TRANSISTOR 2SC3859 | |
| Q601 | 8-729-805-65 | TRANSISTOR 2SA1344 | (AEP, UK, G, AUS) |
| Q602 | 8-729-805-65 | TRANSISTOR 2SA1344 | (AEP, UK, G, AUS) |
| Q603 | 8-729-805-41 | TRANSISTOR 2SC3398 | (AEP, UK, G, AUS) |
| Q604 | 8-729-805-65 | TRANSISTOR 2SA1344 | |
| Q605 | 8-729-805-69 | TRANSISTOR 2SA1341 | |
| Q606 | 8-729-805-45 | TRANSISTOR 2SC3395 | |
| Q607 | 8-729-805-65 | TRANSISTOR 2SA1344 | |
| Q608 | 8-729-805-65 | TRANSISTOR 2SA1344 | |

# MAIN

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| Q609 | 8-729-805-41 | TRANSISTOR 2SC3398 | |
| Q611 | 8-729-805-65 | TRANSISTOR 2SA1344 | |
| Q612 | 8-729-805-41 | TRANSISTOR 2SC3398 | |
| Q613 | 8-729-805-41 | TRANSISTOR 2SC3398 | |
| Q616 | 8-729-820-86 | TRANSISTOR 2SB1121-ST | |
| Q617 | 8-729-820-86 | TRANSISTOR 2SB1121-ST | |
| Q618 | 8-729-808-01 | TRANSISTOR 2SD1622-S | |
| Q619 | 8-729-808-01 | TRANSISTOR 2SD1622-S | |
| Q620 | 8-729-808-01 | TRANSISTOR 2SD1622-S | |
| Q6001 | 8-729-111-55 | TRANSISTOR 2SD1312-K | |
| Q6002 | 8-729-111-55 | TRANSISTOR 2SD1312-K | |
| Q6003 | 8-729-111-55 | TRANSISTOR 2SD1312-K | |
| Q6004 | 8-729-600-22 | TRANSISTOR 2SA1235-F | |
| Q6005 | 8-729-805-41 | TRANSISTOR 2SC3398 | |
| | | < RESISTOR > | |
| R101 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R102 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R103 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R104 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R105 | 1-216-077-00 | METAL CHIP 15K 5% 1/10W | |
| R106 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | |
| R107 | 1-216-082-00 | METAL GLAZE 24K 5% 1/10W | (AEP, UK, G, AUS) |
| R108 | 1-216-043-00 | METAL CHIP 560 5% 1/10W | (AEP, UK, G, AUS) |
| R109 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R110 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R111 | 1-216-097-00 | METAL CHIP 100K 5% 1/10W | |
| R112 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R113 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R114 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R115 | 1-216-105-00 | METAL CHIP 220K 5% 1/10W | |
| R116 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R117 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R118 | 1-216-105-00 | METAL CHIP 220K 5% 1/10W | |
| R119 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R120 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R121 | 1-216-093-00 | METAL CHIP 68K 5% 1/10W | |
| R201 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R202 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R203 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R204 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R205 | 1-216-077-00 | METAL CHIP 15K 5% 1/10W | |
| R206 | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W | |
| R207 | 1-216-082-00 | METAL GLAZE 24K 5% 1/10W | (AEP, UK, G, AUS) |
| R208 | 1-216-043-00 | METAL CHIP 560 5% 1/10W | (AEP, UK, G, AUS) |
| R209 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R210 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R211 | 1-216-097-00 | METAL CHIP 100K 5% 1/10W | |
| R212 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R213 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R214 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R215 | 1-216-105-00 | METAL CHIP 220K 5% 1/10W | |
| R216 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R217 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R218 | 1-216-105-00 | METAL CHIP 220K 5% 1/10W | |
| R219 | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W | |
| R220 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R221 | 1-216-093-00 | METAL CHIP 68K 5% 1/10W | |
| R601 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R602 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R603 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | (AEP, UK, G, AUS) |
| R603 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (US, Canadian, E) |
| R605 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (AEP, UK, G, AUS) |
| R605 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | (US, Canadian, E) |
| R606 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (AEP, UK, G, AUS) |
| R606 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | (US, Canadian, E) |
| R607 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | (US, Canadian, E) |
| R607 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | (AEP, UK, G, AUS) |
| R608 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | (AEP, UK, G, AUS) |
| R608 | 1-216-088-00 | METAL CHIP 43K 5% 1/10W | (US, Canadian, E) |
| R609 | 1-216-083-00 | METAL CHIP 27K 5% 1/10W | (AEP, UK, G, AUS) |
| R611 | 1-216-073-00 | METAL CHIP 10K 5% 1/10W | |
| R612 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R613 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R614 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R615 | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W | |
| R616 | 1-216-097-00 | METAL CHIP 100K 5% 1/10W | |
| R617 | 1-216-097-00 | METAL CHIP 100K 5% 1/10W | |
| R618 | 1-216-097-00 | METAL CHIP 100K 5% 1/10W | |

## MAIN

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R619 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R620 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W | |
| R621 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R623 | 1-216-113-00 | METAL CHIP | 470K | 5% | 1/10W | |
| R624 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R625 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R626 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R628 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R629 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W | |
| R630 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R631 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R634 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R635 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R636 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R637 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R638 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R639 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W | |
| R640 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W | |
| R641 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R642 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R643 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R644 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R645 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R646 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R647 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R648 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R649 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R650 | 1-216-121-00 | METAL CHIP | 1M | 5% | 1/10W | |
| R651 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R652 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R653 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R654 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R655 | 1-216-121-00 | METAL CHIP | 1M | 5% | 1/10W | |
| R656 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R661 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W | |
| R662 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W | |
| R663 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R664 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W | |
| R665 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R666 | 1-216-045-00 | METAL CHIP | 680 | 5% | 1/10W | |
| R667 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R668 | 1-216-090-00 | METAL CHIP | 51K | 5% | 1/10W | |
| R669 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R670 | 1-216-084-00 | METAL GLAZE | 30K | 5% | 1/10W | |
| R671 | 1-216-090-00 | METAL CHIP | 51K | 5% | 1/10W | |
| R672 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R673 | 1-216-080-00 | METAL CHIP | 20K | 5% | 1/10W | |
| R674 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W | |
| R675 | 1-216-080-00 | METAL CHIP | 20K | 5% | 1/10W | |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R676 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R677 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R678 | 1-216-084-00 | METAL GLAZE | 30K | 5% | 1/10W | |
| R679 | 1-216-083-00 | METAL CHIP | 27K | 5% | 1/10W | |
| R680 | 1-216-090-00 | METAL CHIP | 51K | 5% | 1/10W | |
| R681 | 1-216-090-00 | METAL CHIP | 51K | 5% | 1/10W | |
| R682 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R683 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R686 | 1-216-077-00 | METAL CHIP | 15K | 5% | 1/10W | |
| R687 | 1-216-077-00 | METAL CHIP | 15K | 5% | 1/10W | |
| R690 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R691 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W | |
| R692 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R693 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W | |
| R696 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R699 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W | |
| R700 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R6001 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R6002 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W | |
| R6003 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W | |
| R6004 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R6005 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W | |
| R6006 | 1-216-049-00 | METAL CHIP | 1K | 5% | 1/10W | |
| R6007 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W | |
| R6008 ⚠ | 1-212-849-00 | FUSIBLE | 4.7 | 5% | 1/4W | F |
| R6009 ⚠ | 1-219-137-11 | FUSIBLE | 0.33 | 10% | 1/4W | F |
| R6010 ⚠ | 1-219-137-11 | FUSIBLE | 0.33 | 10% | 1/4W | F |
| R9031 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9032 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9033 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9034 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9035 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9036 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9037 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| R9038 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W | |
| | | < TRANSFORMER > | | | | |
| T601 | 1-450-458-11 | TRANSFORMER, DC-DC CONVERTER | | | | |
| | | < TEST PIN > | | | | |
| TP601 * | 1-564-517-11 | PLUG, CONNECTOR 2P | | | | |
| | | < CERAMIC > | | | | |
| X601 | 1-577-358-21 | VIBRATOR, CERAMIC | | | | |

| Note: | Note: |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une pièce portant le numéro spécifié. |

# AUDIO(DECK A)  AUDIO(DECK B)

* A-2006-399-A MOUNTED PCB, AUDIO (DECK A)
***************************

< CAPACITOR >

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C11 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C12 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C13 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C18 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C21 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C22 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C23 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C28 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C31 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C32 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C71 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |

< CONNECTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| CNJ31 | * 1-580-782-11 | CONNECTOR, BOARD TO BOARD |
| CNP32 | * 1-580-772-11 | PIN, CONNECTOR (PC BOARD) 4P |
| CNP71 | * 1-564-719-11 | PIN, CONNECTOR (SMALL TYPE) 3P |
| CNP72 | * 1-580-411-11 | SOCKET, CONNECTOR 4P |

< IC >

| Ref. No. | Part No. | Description |
|---|---|---|
| IC31 | 8-759-970-66 | IC LM833M |

< JUMPER >

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| JW1 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW51 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW52 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW53 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW54 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |

< TRANSISTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| Q71 | 8-729-602-36 | TRANSISTOR 2SA1602 |

< RESISTOR >

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R11 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R12 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R13 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R14 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R21 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R22 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R23 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R24 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R31 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R32 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R71 | 1-216-082-00 | METAL GLAZE | 24K | 5% | 1/10W |
| R72 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R73 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R74 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |

< VARIABLE RESISTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| RV11 | 1-238-012-11 | RES, ADJ, CARBON 1K (PB LEVEL L) |
| RV21 | 1-238-012-11 | RES, ADJ, CARBON 1K (PB LEVEL R) |
| RV71 | 1-238-016-11 | RES, ADJ, CARBON 10K (NORMAL SPEED) |
| RV72 | 1-238-016-11 | RES, ADJ, CARBON 10K (HIGH SPEED) |

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* A-2006-400-A MOUNTED PCB, AUDIO (DECK B)
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< CAPACITOR >

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C11 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C12 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C13 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C14 | 1-136-273-91 | FILM | 75PF | 5% | 630V |
| C15 | 1-164-080-11 | CERAMIC | 390PF | 10% | 50V |
| C17 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C18 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C21 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C22 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C23 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C24 | 1-136-273-91 | FILM | 75PF | 5% | 630V |
| C25 | 1-164-080-11 | CERAMIC | 390PF | 10% | 50V |
| C27 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C28 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C31 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C32 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C33 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C51 | 1-163-019-00 | CERAMIC CHIP | 0.0068uF | 10% | 50V |
| C52 | 1-163-019-00 | CERAMIC CHIP | 0.0068uF | 10% | 50V |
| C53 | 1-163-022-00 | CERAMIC CHIP | 0.012uF | 10% | 50V |
| C54 | 1-136-559-11 | FILM | 0.0047uF | 5% | 630V |
| C56 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C57 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C58 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C71 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |

< CONNECTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| CNJ31 | * 1-580-782-11 | CONNECTOR, BOARD TO BOARD |
| CNJ33 | * 1-580-782-11 | CONNECTOR, BOARD TO BOARD |
| CNP32 | * 1-580-781-11 | PIN, CONNECTOR (PC BOARD) 7P |
| CNP71 | * 1-564-719-11 | PIN, CONNECTOR (SMALL TYPE) 3P |
| CNP72 | * 1-580-411-11 | SOCKET, CONNECTOR 4P |

## AUDIO(DECK B)

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < DIODE > | | | |
| D31 | 8-719-988-62 | DIODE 1SS355 | | | |
| | | < IC > | | | |
| IC31 | 8-759-970-66 | IC LM833M | | | |
| | | < JUMPER > | | | |
| JW1 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW2 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW3 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW4 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW5 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW6 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW7 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW52 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW53 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW54 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW55 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW56 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW57 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW58 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW59 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW60 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW61 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| | | < COIL > | | | |
| L11 | 1-410-780-11 | INDUCTOR | 27mH | | |
| L21 | 1-410-780-11 | INDUCTOR | 27mH | | |
| | | < TRANSISTOR > | | | |
| Q51 | 8-729-808-01 | TRANSISTOR 2SD1622 | | | |
| Q52 | 8-729-808-01 | TRANSISTOR 2SD1622 | | | |
| Q53 | 8-729-808-01 | TRANSISTOR 2SD1622 | | | |
| Q71 | 8-729-602-36 | TRANSISTOR 2SA1602 | | | |
| | | < RESISTOR > | | | |
| R11 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R12 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R13 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R14 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R15 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R21 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R22 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R23 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R24 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R25 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R31 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R32 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R41 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R42 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R51 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R52 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R53 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R54 | 1-216-309-00 | METAL CHIP | 5.6 | 5% | 1/10W |
| R55 | 1-216-309-00 | METAL CHIP | 5.6 | 5% | 1/10W |
| R56 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W |
| R71 | 1-216-082-00 | METAL GLAZE | 24K | 5% | 1/10W |
| R72 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R73 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R74 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| | | < VARIABLE RESISTOR > | | | |
| RV11 | 1-238-012-11 | RES, ADJ, CARBON 1K (PB LEVEL L) | | | |
| RV12 | 1-238-551-11 | RES, ADJ, CARBON 220K (REC BIAS L) | | | |
| RV21 | 1-238-012-11 | RES, ADJ, CARBON 1K (PB LEVEL R) | | | |
| RV22 | 1-238-551-11 | RES, ADJ, CARBON 220K (REC BIAS R) | | | |
| RV71 | 1-238-016-11 | RES, ADJ, CARBON 10K (NORMAL SPEED) | | | |
| RV72 | 1-238-016-11 | RES, ADJ, CARBON 10K (HIGH SPEED) | | | |
| | | < RELAY > | | | |
| RY31 | 1-515-726-11 | RELAY | | | |
| | | < COIL > | | | |
| T51 | 1-406-419-11 | COIL, BIAS OSCILLATION | | | |

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## PANEL

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | * A-2006-424-A | PANEL BOARD, COMPLETE (AEP, UK, G, AUS) | | | |
| | * A-2006-426-A | PANEL BOARD, COMPLETE (US, Canadian, E) | | | |

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| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | * 3-367-839-01 | HOLDER, FL TUBE | | | |
| | * 4-932-810-11 | CUSHION (FL) | | | |
| | | < CAPACITOR > | | | |
| C351 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C352 | 1-124-638-11 | ELECT | 22uF | 20% | 10V |
| C353 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C354 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| | | < CONNECTOR > | | | |
| CN351 | 1-580-883-41 | SOCKET, CONNECTOR (SMT) 12P | | | |

## PANEL

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < DIODE > | |
| D351 | 8-719-301-37 | LED SEL2210S-CD (NORMAL SPEED) | |
| D352 | 8-719-301-37 | LED SEL2210S-CD (HIGH SPEED) | |
| D353 | 8-719-301-37 | LED SEL2210S-CD (CD SYNCHRO) | |
| | | < FLUORESCENT > | |
| FL351 | 1-519-638-11 | INDICATOR TUBE, FLUORESCENT | |
| | | < IC > | |
| IC351 | 8-759-323-35 | IC HD-614023-FA93 | |
| | | < RESISTOR > | |
| R351 | 1-216-029-00 | METAL CHIP 150 5% 1/10W | |
| R352 | 1-216-033-00 | METAL CHIP 220 5% 1/10W | |
| R353 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R354 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| R355 | 1-216-045-00 | METAL CHIP 680 5% 1/10W | |
| R356 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R357 | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W | (US, Canadian, E) |
| R357 | 1-216-067-00 | METAL CHIP 5.6K 5% 1/10W | (AEP, UK, G, AUS) |
| R359 | 1-216-029-00 | METAL CHIP 150 5% 1/10W | |
| R360 | 1-216-033-00 | METAL CHIP 220 5% 1/10W | |
| R361 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R362 | 1-216-041-00 | METAL CHIP 470 5% 1/10W | |
| R363 | 1-216-045-00 | METAL CHIP 680 5% 1/10W | |
| R364 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R365 | 1-216-067-00 | METAL CHIP 5.6K 5% 1/10W | |
| R366 | 1-216-295-00 | METAL CHIP 0 5% 1/10W | |
| R367 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R368 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R369 | 1-216-089-00 | METAL CHIP 47K 5% 1/10W | |
| R371 | 1-216-049-00 | METAL CHIP 1K 5% 1/10W | |
| R375 | 1-216-081-00 | METAL CHIP 22K 5% 1/10W | |
| R376 | 1-216-121-00 | METAL CHIP 1M 5% 1/10W | |
| R377 | 1-216-085-00 | METAL CHIP 33K 5% 1/10W | |
| R378 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R379 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R380 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| R381 | 1-216-025-00 | METAL CHIP 100 5% 1/10W | |
| | | < SWITCH > | |
| S351 | 1-572-184-11 | SWITCH, KEYBOARD (CD SYNCHRO) | |
| S352 | 1-572-184-11 | SWITCH, KEYBOARD (◁◁) | |
| S353 | 1-572-184-11 | SWITCH, KEYBOARD (▷▷) | |
| S354 | 1-572-184-11 | SWITCH, KEYBOARD (00 ) | |
| S355 | 1-572-184-11 | SWITCH, KEYBOARD (DECK B) | |
| S356 | 1-572-184-11 | SWITCH, KEYBOARD (DECK A) | |
| S357 | 1-572-184-11 | SWITCH, KEYBOARD (RESET) | |
| S358 | 1-572-184-11 | SWITCH, KEYBOARD (DOLBY NR) | |
| S361 | 1-572-184-11 | SWITCH, KEYBOARD (NORMAL SPEED) | |
| S362 | 1-572-184-11 | SWITCH, KEYBOARD (HIGH SPEED) | |
| S363 | 1-572-184-11 | SWITCH, KEYBOARD (□) | |
| S364 | 1-572-184-11 | SWITCH, KEYBOARD (▷) | |
| S365 | 1-572-184-11 | SWITCH, KEYBOARD (▷) | |
| S366 | 1-572-184-11 | SWITCH, KEYBOARD (REC ●) | |
| S368 | 1-572-184-11 | SWITCH, KEYBOARD (DIRECTION) | |
| | | < CERAMIC > | |
| X351 | 1-577-359-21 | VIBRATOR, CERAMIC | |

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MISCELLANEOUS
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| Ref. No. | Part No. | Description |
|---|---|---|
| 6 | 1-590-904-11 | WIRE, FLAT TYPE (12 CORE) |
| 22 | 1-590-579-11 | CORD (WITH CONNECTOR) |
| 23 | 1-590-902-11 | WIRE, FLAT TYPE (9 CORE) |
| 72 | 1-638-983-11 | PC BOARD, MOTOR FLEXIBLE |
| HP901 | A-2003-837-A | BASE ASSY, HEAD (DECK A) |
| HRPE901 | A-2003-838-A | BASE ASSY, HEAD (DECK B) |
| M901A | X-3359-417-1 | MOTOR ASSY, CAPSTAN |
| M901B | X-3359-417-1 | MOTOR ASSY, CAPSTAN |
| M902A | X-3363-501-1 | MOTOR ASSY, REEL |
| M902B | X-3363-501-1 | MOTOR ASSY, REEL |

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ACCESSORY & PACKING MATERIAL
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| Ref. No. | Part No. | Description |
|---|---|---|
| * | 4-943-847-01 | CUSHION, UPPER (EXECPT E) |
| * | 4-943-848-01 | CUSHION, LOWER (EXCEPT E) |

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## HARDWARE LIST
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| Ref. No. | Part No. | Description |
|---|---|---|
| # 1 | 7-621-773-93 | SCREW (PANEL 2.6 TP2) |
| # 2 | 7-621-255-15 | SCREW +PTT 2X3 (S) |
| # 3 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S |
| # 4 | 7-685-870-01 | SCREW +BVTT 3X5 |
| # 5 | 7-682-547-04 | SCREW +BVTT 3X6 (S) |
| # 6 | 7-621-775-00 | SCREW +B 2.6X3 |
| # 7 | 7-627-556-08 | SCREW +P 2.6X2.8 |

9-956-342-11

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**Audio Group**

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